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ABSTRACT

This 1984 study analyzes the performance of part-time faculty in community colleges in response to the trend toward increased utilization of part-time instructors. Part-time instructors, or part-timers, are most heavily used in community colleges, which represent the most market-sensitive segment of American higher education. The number of part-time teachers in American community colleges reached 140,000 in 1981, and these part-timers teach about 31% of the full-time equivalent contact hours. In publicly-funded community colleges, part-time faculty exceeded 58% of the total by the fall of 1982. Faculty organizations view this trend with alarm, questioning both the quality of instruction by their part-time counterparts, and the motives of administrators in employing them. However, studies based on student evaluations have not detected any significant differences in the quality of instruction delivered by part- and full-time instructors. Three national studies, on the other hand, have detected differences between part- and full-time faculty in characteristics and behaviors that are commonly regarded as influencing instructional effectiveness. This study examines the comparative effectiveness of part- and full-time instructors in terms of the instructional measures of student retention and grade achievement in a subsequent sequential course. Parallel studies conducted over 5- and 8-year periods found that part-timers were at least as effective as their full-time counterparts. (Contains 93 references, 38 figures, and 6 tables.) (NB)

AN EVALUATION OF THE INSTRUCTIONAL EFFECTIVENESS
OF PART-TIME COMMUNITY COLLEGE DEVELOPMENTAL
WRITING FACULTY

by

George Robert Boggs, B.S., M.A.

DISSERTATION

Presented to the Faculty of the Graduate School of
The University of Texas at Austin
in Partial Fulfillment
of the Requirements
for the Degree of
DOCTOR OF PHILOSOPHY

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DEDICATION

This work is dedicated to my sons, Kevin, Ian, and Micah, and to my wife, Ann, for their willingness to share this adventure with me.

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It is difficult to imagine how any study of this sort could be completed without the help and support of some very significant people. In particular, I appreciate the support and valuable suggestions offered by the members of the supervisory committee. Dr. Lorrin Kennamer, Dean of the College of Education, was generous with his friendly advice. Dr. Stanton Calvert, former Director of Community College Programs for the Texas Coordinating Board, provided important feedback on the preliminary drafts of this dissertation. Dr. Robert C. Rodgers, Professor of Management, offered valuable advice regarding statistical analyses and corrections for individual faculty grading patterns. Dr. George A. Baker, Associate Professor of Educational Administration, suggested a possible interaction between student and faculty status, which led to the most significant finding of the study. Dr. John E. Roueche, Professor and Director of the Program in Community College Education and my major advisor, provided consistent support and expressions of confidence in my work.

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Most of all, my thanks go to my family, whose understanding and encouragement carried me through this project. My wife, Ann, and

my sons, Kevin, Ian, and Micah, accepted my student lifestyle graciously. Ann was my true partner in this endeavor. She was at my side collecting and recording data. She entered the massive primary data file into the computer and was responsible for typing all drafts of this dissertation. To her, I am most grateful.

AN EVALUATION OF THE INSTRUCTIONAL EFFECTIVENESS
OF PART-TIME COMMUNITY COLLEGE DEVELOPMENTAL
WRITING FACULTY

Publication No. _____

George R. Boggs, Ph. D.
The University of Texas at Austin, 1984

Supervising Professor: John E. Roueche

The increased utilization of part-time faculty in American community colleges has resulted in serious questions about the quality of instruction delivered. The purpose of this study was to address these concerns by examining the comparative effectiveness of part- and full-time developmental writing faculty at a comprehensive, public community college in California. Measures of effectiveness were successful completion of students, and student persistence to course completion and grade achievement in a subsequent freshman composition course.

Data were collected to form two data files. The primary file contains information on 3497 cases of students who enrolled in freshman composition at Butte College from Winter quarter 1979 through Fall quarter 1983. This file contains information on student grade achievement and persistence to course completion, as well as the part-

or full-time status of the instructors who taught freshman composition and the previous developmental writing class (if taken). In addition, the primary data file includes information on other factors which were identified as potentially influencing student persistence and achievement.

The secondary data file is comprised of 191 cases of developmental writing classes which enrolled 3955 students from the Fall quarter of 1975 through Summer Session 1983. Schedule, instructor, and grade assignment data were collected, recorded, and analyzed. Despite evidence provided in the literature that institutional practices with regard to part-time instructors could, and probably should, be improved, part-timers in this study were found to be at least as effective as their full-time counterparts. Not only were part- and full-time developmental writing instructors equally effective in terms of successful completion of their students, but their students also went on to achieve about equal grades in the subsequent composition class. In fact, part-timers were slightly, but not significantly, more effective than full-timers in terms of persistence of their students in a subsequent freshman composition class.

In a related finding, part-time freshman composition students in this study showed significantly higher grade achievement and persistence, as well as fewer instances of course repetition, if they took the course from a part-time rather than a full-time instructor.

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CHAPTER I

Introduction

Problem Significance

It is becoming increasingly evident that part-time faculty are playing a significant role in the delivery of educational services in American colleges and universities. An estimated 210,000-215,000 part-timers comprise about one third of all faculty members employed by institutions of higher education in this country (Leslie, Kellams, & Gunne, 1982, p. 19). Furthermore, the trend toward increased utilization of part-time instructors is expected to continue. A linear projection of faculty employment status over the past ten years has led Leslie et al. (1982, p. 23) to predict that 42% of all faculty will teach on a part-time basis by 1985. By this estimate, part-timers, who provided about 10% of all full-time equivalent instruction in 1976, will account for about 20% by 1985 (Leslie et al., 1982, p. 24).

Part-timers are most heavily used in community colleges, which represent the most market-sensitive segment of American higher education. While individual college characteristics may differ, the number of part-time teachers in American community colleges continues to increase each academic year, reaching 140,000 in 1981 (see Figure 1, page 2). Even though, nationally, the percentage of part-time

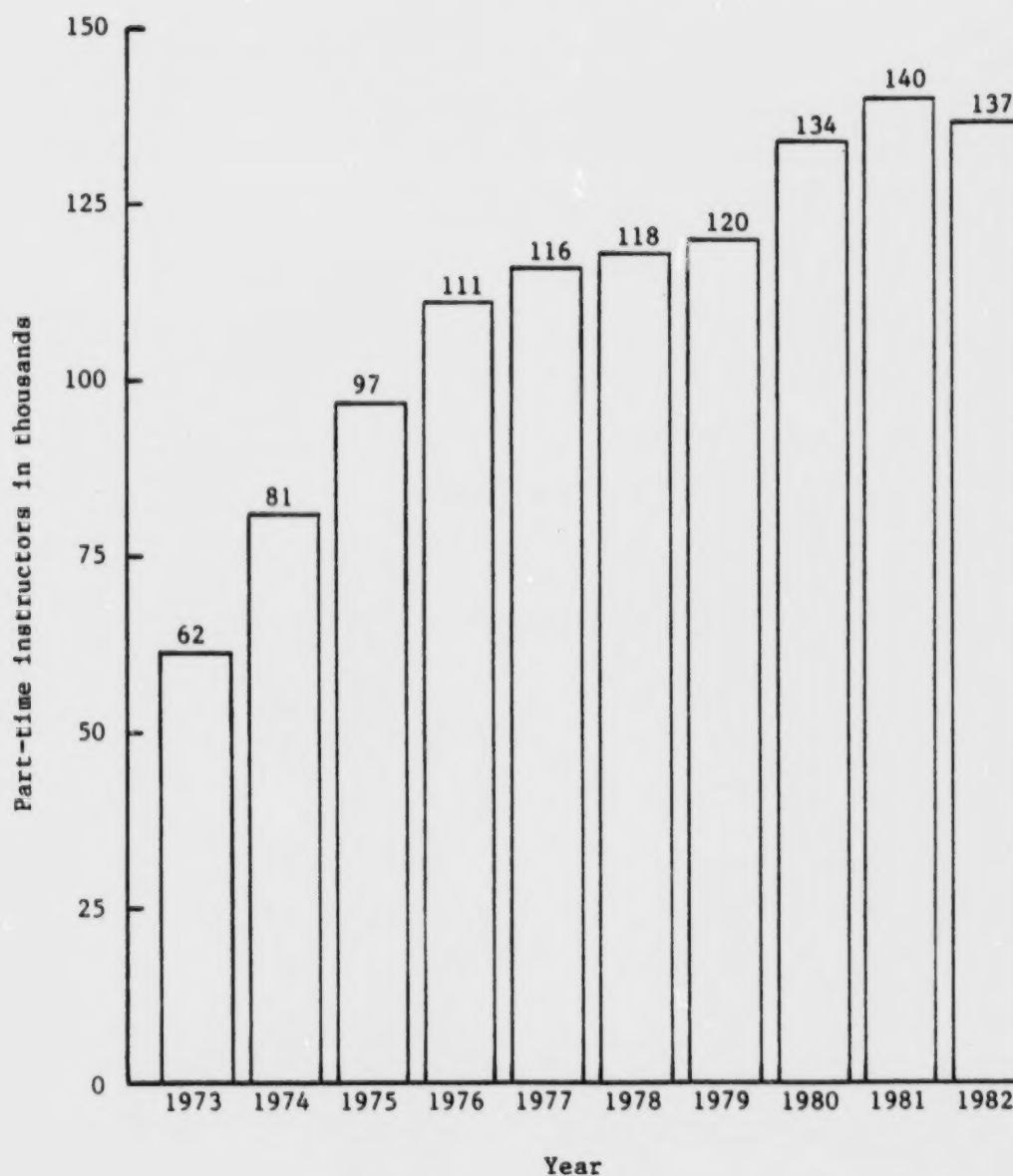


Figure 1. Numbers of Part-Time Instructors in American Community Colleges, 1973-1982

Data Source: American Association of Community and Junior Colleges (1973-1982)

faculty seems to have stabilized at about 57% (see Figure 2, page 4), there are indications this is temporary (Hammons, 1981, p. 52; Leslie et al., 1982, p. 23). Using the estimate provided by the National Center for Educational Statistics (that a part-time instructor represents about one third of a full-time equivalent instructor), these part-timers currently teach about 31% of the full-time equivalent contact hours in American community colleges.

In publicly funded community colleges, part-time faculty members exceeded 58% of the total by the Fall of 1982. Masked by this average utilization figure is the fact that nine states reported that part-timers comprised more than 65% of their community college faculty. In Vermont and Nevada, the figure exceeds 80% (see Table 1, page 5). By the Spring of 1981, 69% of California community college faculty were teaching on a part-time basis. In fact, 34% of the community college class contact hours in California were taught by part-time faculty in the 1980/81 academic year (McIntyre, 1982, p. 1). Moreover, at some non-campus colleges such as Coastline Community College and Vista College in California, Rio Salado Community College in Arizona, and Whatcom Community College in Washington, nearly all of the instruction is delivered by part-time faculty.

Effect on Instructional Quality

This increased utilization of part-time faculty has not come without questions and concern. Faculty organizations view this trend with alarm. They question both the quality of instruction delivered

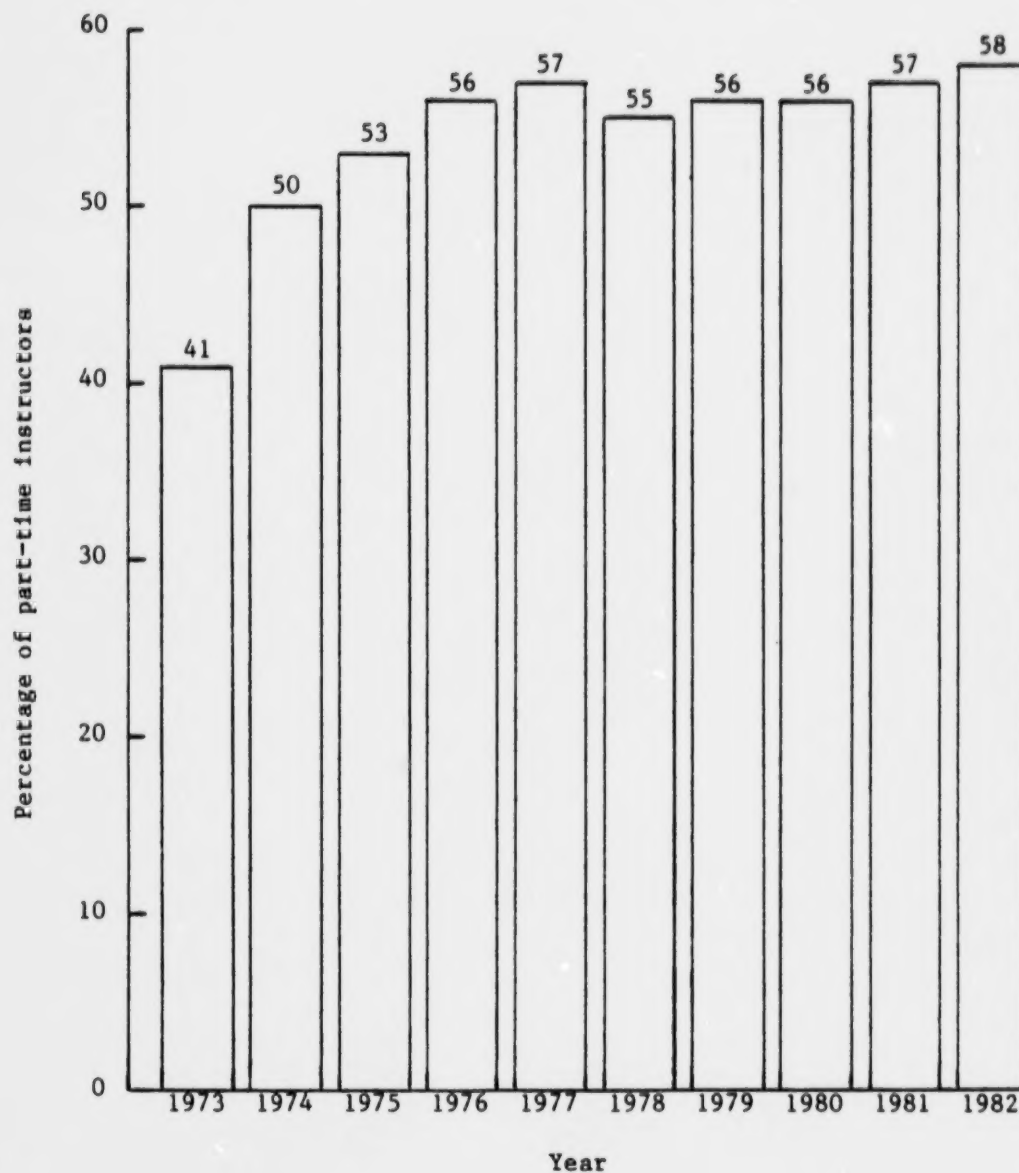


Figure 2. Percentage of Part-Time Instructors in American Community Colleges, 1973-1982

Data Source: American Association of Community and Junior Colleges (1973-1982)

TABLE 1

Faculty in American Public Community Colleges as of October 1982

	Full-Time	Part-Time	Total	% Part-Time		Full-Time	Part-Time	Total	% Part-Time
Ala.	2962	1112	4074	27.3	Nev.	197	878	1075	81.7
Alas.	317	889	1206	73.7	N. H.	177	128	305	42.0
Ariz.	1606	4930	6536	75.4	N. J.	1987	3114	5101	61.0
Ark.	356	334	690	48.4	N. M.	1409	1019	2428	42.0
Ca.	17001	26372	43346	60.8	N. Y.	7681	7810	15491	50.4
Colo.	1013	1684	2697	62.3	N. C.	3414	4231	7645	55.3
Conn.	711	1109	1819	60.9	N. D.	358	63	421	15.0
Del.	222	431	653	66.0	Ohio	3180	4888	8068	60.6
Fla.	4428	7735	12163	63.6	Okla.	1181	1286	2467	52.1
Ga.	1125	942	2067	45.6	Ore.	1697	3615	5312	68.1
Haw.	600	242	842	28.7	Pa.	1929	3470	5399	64.3
Ida.	168	92	260	35.3	R. I.	306	415	721	57.6
Ill.	5401	13196	18372	71.8	S. C.	1274	1779	3053	58.2
Ind.	680	1200	1880	63.8	S. D.	0	0	0	0.0
Ia.	1539	601	2140	28.1	Tenn.	1001	1190	2191	54.3
Kan.	1100	1379	2479	55.6	Tex.	7195	7753	14948	51.9
Ky.	575	487	1062	45.9	Utah	506	433	939	46.1
La.	333	370	703	52.6	Vt.	60	366	426	85.9
Me.	392	328	720	45.5	Va.	2075	2813	4888	57.5
Md.	1816	3139	4955	63.3	Wa.	2540	3498	6038	57.9
Mass.	1518	2319	3837	60.4	W. Va.	581	647	1366	47.4
Mich.	3264	4810	8074	59.6	Wisc.	3281	3918	7199	54.4
Minn.	1252	904	2166	41.7	Wyo.	456	395	851	46.4
Miss.	1815	521	2336	22.3	Am. Samoa	88	4	92	4.3
Mo.	1131	1395	2526	55.2	Guam	98	89	187	47.6
Mont.	79	158	237	66.7	Micronesia	20	9	29	31.0
Neb.	652	1949	2601	74.9	P. R.	588	88	676	13.0
TOTAL						95335	132526	227757	58.2

Source: American Association of Community and Junior Colleges
(1983, p. 72)

by their part-time counterparts and the motives of administrators in employing them (Cottingham, Newman, & Sims, 1981, p. 12; Englebert in Bender & Breuder, 1973, p. 30; Grymes, 1975, p. 8; Magarrell, 1978, p. 6; McFarland, 1982, pp. 2-8; Scheibmeir, 1980, p. 2; Tuckman, 1981, p. 9; Willett, 1980, p. 23). Although this high degree of dependence upon part-time community college faculty has stimulated a great deal of debate on whether it has affected the quality of instruction (Friedlander, 1979, p. 65; Hoenninger & Black, 1978, p. 25), many authors deplore the lack of any substantive evaluative research in the area (Bender & Breuder, 1973, p. 30; Bender & Hammons, 1972, p. 21; Cohen & Brawer, 1982, p. 71; Cruise, Furst, & Klimes, 1980, p. 55; Friedlander, 1980, p. 28; Hammons, 1981, p. 49; Kennedy, 1967, p. 14; Leslie et al., 1982, pp. 11, 15; McClelland, 1981, p. 19; Messersmith in Sewell, Brydon, & Plosser, 1976, p. 5; Overall & Cooper, 1981, p. 4). Based upon research conducted with Ford Foundation sponsorship for the American Association of University Professors, Tuckman and Tuckman (1981, p. 10) state that, if the quality of education is to be preserved, issues regarding part-time faculty will require the serious attention of the educational establishment. "The jury remains out on the question of whether part-timers augment the quality of higher education or whether they debase it."

Previous Studies

Research studies which have attempted to measure differences between the effectiveness of part- and full-time faculty are inconclusive and conflicting (Cohen & Brawer, 1982, p. 71). Studies based upon student evaluations have not, for the most part, detected any significant difference in the quality of instruction delivered by part- and full-time faculty (Cohen & Brawer, 1982, p. 72; Cruise et al., 1980, p. 54; Grymes in Leslie et al., 1982, p. 16; Krauss in Bender & Breuder, 1973, p. 31; Krauss in Cottingham et al., 1981, p. 13; Overall & Cooper, 1981, p. 5; Willett, 1980, p. 28). Cruise et al. (1980, p. 54) also examined comparative effectiveness by analyzing self- and supervisory evaluations. While full-timers rated higher by these measures, the differences were not statistically significant.

However, three national surveys conducted by the Center for the Study of Community Colleges, under grants from the National Endowment for the Humanities and the National Science Foundation, have detected differences between part- and full-time faculty in characteristics and behaviors which are commonly regarded as influencing instructional effectiveness. Full-timers outdistance their part-time counterparts in teaching experience, length of time teaching at the current institution, input into selection of course materials, reading requirements imposed on students, use of instructional media, use of out-of-class activities, use of instructional support services, grading practices, availability to students, and involvement in professional development activities

(Cohen & Brawer, 1982, p. 71; Cohen & Hill, 1978, pp. 5-6; Friendlander, 1979, p. 67; Friedlander, 1980, pp. 28-34). Leslie et al. (1982, p. 85) corroborate these findings. Their study concluded that part-timers assign less rigorous and fewer writing tasks, causing students to fall behind on library research, conceptual skills, and writing facility.

Counterbalancing this research is the knowledge that many part-timers enhance instructional quality by bringing current specialized expertise to the classroom (Bagwell & Elloff, 1981, p. 17; Bender & Hammons, 1972, p. 21; Bonham, 1982, p. 10; Bramlett & Rodriguez, 1982-83, p. 41; Decker, 1980, p. 64; Ernst & McFarlane, 1978, p. 90; Guichard, Mangham, & Gallery, 1975, p. 3; Guthrie-Morse, 1979, p. 11; Hammons, 1981, p. 47; Harris, 1980, p. 13; Kennedy, 1967, p. 15; Kuhns, 1963, pp. 9, 12; Lolley, 1980, p. 48; McDougale, 1980, pp. 20-21; Moe, 1977, p. 35; Price & Lane, 1976, p. 16; Roueche, S. D., & Comstock, 1981, p. I-51). Although Tuckman (1981, p. 9) questions the equivalency of on-the-job experience to scholarship, specialized expertise remains a primary motive for employing part-time faculty. Indeed, in some disciplines, it is impossible to attract full-time employees at prevailing faculty wages (Bender & Hammons, 1972, p. 21; Leslie et al., 1982, p. 96; Lolley, 1980, p. 47).

Moreover, Ernst and McFarlane (1978, p. 90) found, in examining the credentials of more than 800 part-time faculty currently employed by a large multi-campus community college in Virginia, that part-time faculty are equal to their full-time colleagues in academic

preparation. The Ernst and McFarlane findings, however, run contrary to those of the California Community College Chancellor's Office. Based upon 15,753 full-time instructors and 29,879 part-time instructors, McIntyre (1982, p. 51) found, in agreement with Friedlander (1980, pp. 29-30), that part-timers are not as highly college-educated. Kellams and Kyre (1978, p. 19), in their study of 4,755 faculty, report that, although full-time faculty have generally higher levels of education than their part-time counterparts, part-time faculty have the edge in terminal professional degrees.

Institutional practices also have a bearing on the question of quality of instruction delivered. Several research studies have revealed weaknesses in selection, orientation, evaluation, staff development processes, and support services for part-time instructors (Bender & Hammons, 1972, p. 21; Cohen & Brawer, 1982, p. 72; Guthrie-Morse, 1979, p. 10; Leslie et al., 1982, pp. 73, 81-82; Marsh & Lamb, 1975, pp. 21-31; Scheibmeir, 1980, pp. 75, 90; Sewell et al., 1976, pp. 13-16). In addition to providing no measure of quality assurance, loose recruitment and selection procedures may limit the cultural diversity of the instructional staff. Widely advertised full-time vacancies often attract applicants from other parts of the country, while poorly recruited part-timers may bring less staff diversity, resulting in a more provincial faculty (Hammons, 1981, p. 49).

In a rare study of instructional outcomes, Willett (1980, p. 23) could find no significant difference between part- and full-time faculty as measured by retention of students and by student

achievement in a subsequent course. However, the student follow-up segment of her research was clearly secondary to her study of student evaluation differences. Only twenty-four students were found to have matriculated into the next level for the ten sampled courses. This small sample size presents a challenge to statistical conclusion validity. Indeed, the researcher admits to this limitation and indicates that her research is not exhaustive in the dimensions of assessing instructional effectiveness.

Purpose of the Study

The present study, then, fills a void in the research regarding the comparative effectiveness of full- and part-time faculty. The focuses of previous studies have been on comparisons of characteristics of full- and part-timers, performance evaluations (student, self-, and supervisory), and institutional practices; while they are of interest, they leave the question of instructional effectiveness unanswered. The present study examines the comparative effectiveness of part- and full-time faculty in terms of the instructional measures of student retention (persistence to course completion) and grade achievement in a subsequent sequential course.

Skills and knowledge which are gained in a prerequisite course should be predictive of student grade achievement and persistence in a subsequent course. If part-timers and full-timers differ significantly in their teaching effectiveness, this difference should

be revealed as differences in measures of student achievement and retention in the subsequent course.

Of course, many factors affect both measures of the dependent variable. Although many of these effects (intervening variance) should be balanced by the size of the sample and the longitudinal nature of the study, several of these factors have been identified and recorded during the project (see Table 2, page 12). These recorded factors were then used as control variables in the analysis. Any differences detected between the effectiveness of full- and part-time instructors were measured against these control variables for relative importance. Interactions between the independent and control variables were measured for significance. Individual student enrollments served as the unit of analysis.

Research Questions

Although research designs can be structured in many ways, there is considerable justification for using questions to state problems. When used in this sense, questions are designed primarily to discover facts or to establish relationships (Castetter & Heisler, 1980, p. 10). Guiding the design of the project are the following questions:

1. Do students who were enrolled in developmental writing classes differ from one another in terms of successful completion of that course depending upon whether they took the course from a full-time or part-time instructor?

TABLE 2
Control Variables

1. Student Gender
2. Quarter Student Enrolled in Each Course
3. Year Student Enrolled in Each Course
4. Terms Between Prerequisite and Subsequent Course
5. Course Schedule (Time of Day for Each Course)
6. Meetings per Week for Each Course
7. Location for Each Course
8. Class Size for Each Course
9. Instructor Gender for Each Course
10. Student High School Grade Point Average
11. Student Butte College Grade Point Average
12. Student Score on English Section of ACT
13. Student Score on Verbal Section of SAT
14. Student Score on Nelson-Denny Reading Test
15. Student Score on Stanford Task English Assessment Examination
16. Student Score on Stanford Task Reading Assessment Examination
17. Units Completed at Butte College

2. Do students who were enrolled in freshman composition classes differ from one another in terms of achievement and persistence to course completion depending upon whether they took their prerequisite developmental writing course from a full- or part-time instructor?
3. Do students who were enrolled in freshman composition classes taught by full-time instructors differ from one another in terms of achievement and persistence to course completion depending upon whether they took their prerequisite developmental course from a full-time or part-time instructor?
4. Do students who were enrolled in freshman composition classes taught by part-time instructors differ from one another in terms of achievement and persistence to course completion depending upon whether they took their prerequisite developmental course from a full-time or part-time instructor?

Design of the Study

Operational definition of the independent variable. The independent variable in this research project is the full- or part-time status of faculty. Although the distinction between full- and part-time faculty in many areas of the country is defined by salary differential, tenure status, and institutional practices, in California the statutes are more specific.

Since 1850, the California Legislature has been particularly active in enacting laws pertaining to education. The results of this continuing legislative concern reveal an accommodation to the different, and occasionally conflicting, pressures from interested parties. The Education Code in that state prohibits the arbitrary dismissal of certificated employees who have obtained positions of a settled and continuing nature (regular or contract teachers) by requiring notice and a hearing before termination. To fill its short-range needs, however, a district may employ a certificated person as a temporary employee who may, as a general rule, be non-renewed at the pleasure of the district.

Section 13337.5 of the Education Code, which was adopted in 1967 and which created the "temporary" classification, has been interpreted by the courts as a definition of part-time status (California Teachers Association v. Santa Monica Community College, 1978; Peralta Federation of Teachers v. Peralta Community College District, 1979). The courts have held that teachers who were hired after 1967 and who taught 60% or fewer of the hours per week considered a full-time assignment could not claim tenure status.

Because of these rulings, California community colleges have limited part-time instructors to teaching loads of 60% or less than that of a full-time instructor. Since this definition is the one used by the colleges, it shall serve as the operational definition for the purposes of this study. Full-time instructors are those who have been so classified by virtue of the fact that their teaching loads have

exceeded 60% of a full load during any academic year. Part-time instructors are those whose teaching loads remain below 60% of a full-time instructor's load.

Operational definition of the dependent variable. The dependent variable, teaching effectiveness in developmental writing, has been defined by three methods. The first was successful completion of students in the developmental writing class as determined by the percent of credit grades assigned. The second was student retention in a subsequent sequential course, in this case freshman composition. In other words, this second measure of teacher effectiveness in developmental English was the persistence of the teacher's students in the subsequent freshman composition class.

The third measure of teaching effectiveness was student achievement in freshman composition. In this case, the teachers' effectiveness in developmental English was measured by the grades their students received in the subsequent freshman composition class.

The developmental English and freshman composition classes were selected because the researcher believes that instructor ability in teaching developmental writing is critical for student success. The teaching of any developmental skill requires a higher degree of teacher-student contact than that which is required in many other college courses. Students in developmental courses generally have not experienced success in their previous educational endeavors and may, indeed, behave in ways which inhibit learning. Teachers skills necessary to break this pattern of failure are critical (Roueche and

Mink, 1982, pp. 2-5). If a difference in the effectiveness between full- and part-time instructors was to be detected, these classes should have provided one of the best opportunities. Other reasons for selecting these classes were the availability of archival data reaching back more than ten years and a fairly good distribution of full- and part-time staffing in the classes of interest during most of that period at the research site.

Setting

Historical development. Butte College is a single-campus, comprehensive, public community college located in the northern Sacramento Valley in California. The Butte Community College District was formed by the citizens of Butte County in 1966. Prior to the formation of the District, most of the community college education for students in Butte and Glenn Counties was provided by Yuba College in Marysville and Shasta College in Redding. Through an annexation process, Glenn County was added to the District in July, 1976.

Since the initial year of operation in 1968/69 on a temporary campus in Durham, the seven-member Board of Trustees and administration have stressed a balance in curricular offerings. The "open door" admission policy and the comprehensiveness of instructional and support services have been paramount goals guiding the historical development of Butte College.

In 1974, the college moved its main operation from Durham to a permanent site at Pentz and Clark Roads. This placed the campus in

the center of a triangle between the three major population centers in Butte County (Chico, Paradise, and Oroville). A majority of the permanent construction has been completed with state construction funds and a local matching permissive tax. On three occasions, bond elections failed by very narrow margins.

Accreditation and authorizations. Butte College is accredited by the Western Association of Schools and Colleges, one of six nationally recognized regional accrediting agencies. The college is approved by the California Community College Board of Governors, California Board of Licensed Vocational Nurse Examiners, Commission on Peace Officers Standards and Training, Joint Review Committee for Health Education, Board of Vocational Nurse and Psychiatric Technician Examiners, Butte County Board of Health, and the State Department of Public Health. Courses equivalent to college and university work are accepted by California State University and the University of California.

By authorization of the California Community College Board of Governors, the Butte Community College District may confer the Associate Degree on those students completing ninety-four or more quarter units in prescribed courses with a 2.0 or better grade point average.

Class offerings. In addition to classes scheduled at the main campus, the college offers both day and evening classes in the community. These offerings parallel campus courses in prerequisites, course content, and student performance expectations. A full range of

classes is offered Monday through Friday from 8:00 AM to 5:00 PM and Monday through Thursday from 5:30 PM to 10:30 PM. Regular college credit is earned in most classes.

Staff. The college currently employs 117 full-time certificated instructors and 24 administrators. Over 200 part-time faculty members are employed each quarter. Seven of the full-time instructors are assigned to teach classes in freshman composition and developmental English.

Student enrollment. Student enrollment during the 1983/84 academic year was approximately 9,200, with a full-time equivalent enrollment of about 5,700.

English course sequence. ENG 102 (Composition Workshop II) is a four-unit course in developmental English which also fulfills an Associate Degree graduation requirement. Prerequisites are English 101 (Composition Workshop I) or an acceptable score on the English placement test. Composition Workshop II is described as providing development of basic composition skills: how to write clear and unified paragraphs, how to build from sentence to paragraph to essay. The course is not graded and is offered on a credit or no-credit basis only.

ENG 210 (Reading and Composition I) is a four-unit course in freshman composition. Prerequisites are currently ENG 102 (Composition Workshop II) or an acceptable score on the English placement test. The course is accepted by both the University of California and the California State University systems as transferable

for freshman composition and is described as a development of critical reading skills and the writing of narrative, descriptive, expository, and argumentative prose. The course must be taken for a letter grade (A-F).

The English placement test was administered beginning with the 1982/83 academic year. Prior to that time, little data were systematically collected on measures of student ability or preparedness.

During the 1982/83 academic year, 540 students enrolled in twenty-four sections of ENG 102. Fourteen of the twenty-four sections were staffed by full-time instructors. During the same period, ENG 210 drew 759 students in thirty sections, seventeen of which were staffed by full-time faculty. A similar staffing pattern has existed for approximately five years. Records are available for these courses for the past thirteen years.

Institutional practices. Butte College is typical of many community colleges, in that institutional practices with regard to part-time faculty members could be improved. Weaknesses in selection, orientation, evaluation, and staff development practices are apparent. Part-time instructors are usually recommended for employment by the coordinator or Associate Dean of Instruction. Selection procedures are less formal than they are for full-time employment. Part-timers are oriented at an annual meeting, prior to the start of school in the Fall, and informally by interested full-time instructors and the coordinator. Performance evaluations for both full- and part-time

faculty have been sporadic. Staff development activities for part-time instructors are minimal.

Summary

Employment of a large number of part-time faculty raises significant questions regarding the effect upon instructional quality (Bonham, 1982, p. 11). As stated previously, research done to date is conflicting and inconclusive. Furthermore, it has not focused upon instructional outcomes.

The present study adds to this research by comparing the instructional effectiveness of part- and full-time developmental writing faculty at a single community college whose personnel practices are probably typical of those in other community colleges. Effectiveness was measured by examining the rate of successful completion of students, and student persistence to course completion and grade achievement in a subsequent freshman composition course.

Data were collected to form two data files. The primary file contains information on 3497 cases of students who enrolled in freshman composition at Butte College from Winter quarter 1977 through Fall quarter 1983. This file contains information on student grade achievement and persistence to course completion, as well as the part- or full-time status of the instructors who taught freshman composition and the previous developmental writing class (if taken). In addition, the primary data file includes information on other factors which were

identified as potentially influencing student persistence and achievement.

The secondary data file is comprised of 191 cases of developmental writing classes which enrolled 3955 students from the Fall quarter 1975 through Summer Session 1983. Schedule, instructor, and grade assignment data were collected, recorded, and analyzed. Analysis of these data, along with those in the primary data file, provided a strong basis of comparison of the instructional effectiveness of full- and part-time instructors. Furthermore, the study revealed an interesting interaction between the full- or part-time status of the student and that of the instructor.

CHAPTER II

A Review of Related Literature, Theory, and Research

An Organizational Perspective

A period of uncertainty. The survival of an organization, according to Chester Barnard (1938, p. 6), depends upon the maintenance of an equilibrium of complex character in a continuously fluctuating environment. This requirement, Barnard tells us, calls for readjustment of internal organizational processes. Many institutions of higher education today are caught in an undertow of external and internal environmental forces.

The exigencies of eroding financial bases on the one hand and extraordinary cost increases on the other present severe challenges to institutional survival. At the same time, the nature of the college client is changing. The new students are older, more frequently part-time, and find it necessary to schedule their learning around full- or part-time employment. They come to us with diverse backgrounds and abilities, many combining their underpreparedness with low self-esteem and a history of failure (Roueche, J. E., & Mink, 1982, p. 2). Support systems, services, and education for these non-traditional learners require creative class schedules, new structures, increased effort, and more expense. Predictions of an imminent decline in

college-age population (Noel, 1978, p. vii) and shifting enrollment patterns (see Figure 3, page 24) present added uncertainty.

Delivery of educational services in this unsettling atmosphere is, indeed, a challenge. To survive, colleges must be able to respond to financial constraints, new demands, and changing enrollment patterns on a term-by-term basis. One of the most hotly debated responses to uncertainty has been the increased utilization of part-time faculty in institutions of higher education.

Institutional response. Jim Hammons (1981, pp. 46-47) suggests that the major reasons for employing part-time faculty are reduced cost, flexibility, freedom to experiment, availability, specialized expertise, and improved community relations. Other authors have referred to the use of part-time faculty to meet affirmative action guidelines (Eliason, 1980, p. 6), to frustrate collective bargaining (Marsh and Lamb, 1975, p. 14), and to bring new human talent into a stagnant academic society (Blackburn, 1978, p. 99).

These factors, of course, play a varying part in the degree to which part-time instructors are used at individual colleges. Decisions are based upon such unique conditions as the nature of the community, the financial status of the college, the types of students served, the types of courses offered, and legal constraints imposed by state law, local policies, and negotiated contracts.

The bifurcation of the instructional staff into full-time and part-time employees, however, presents unique challenges to an

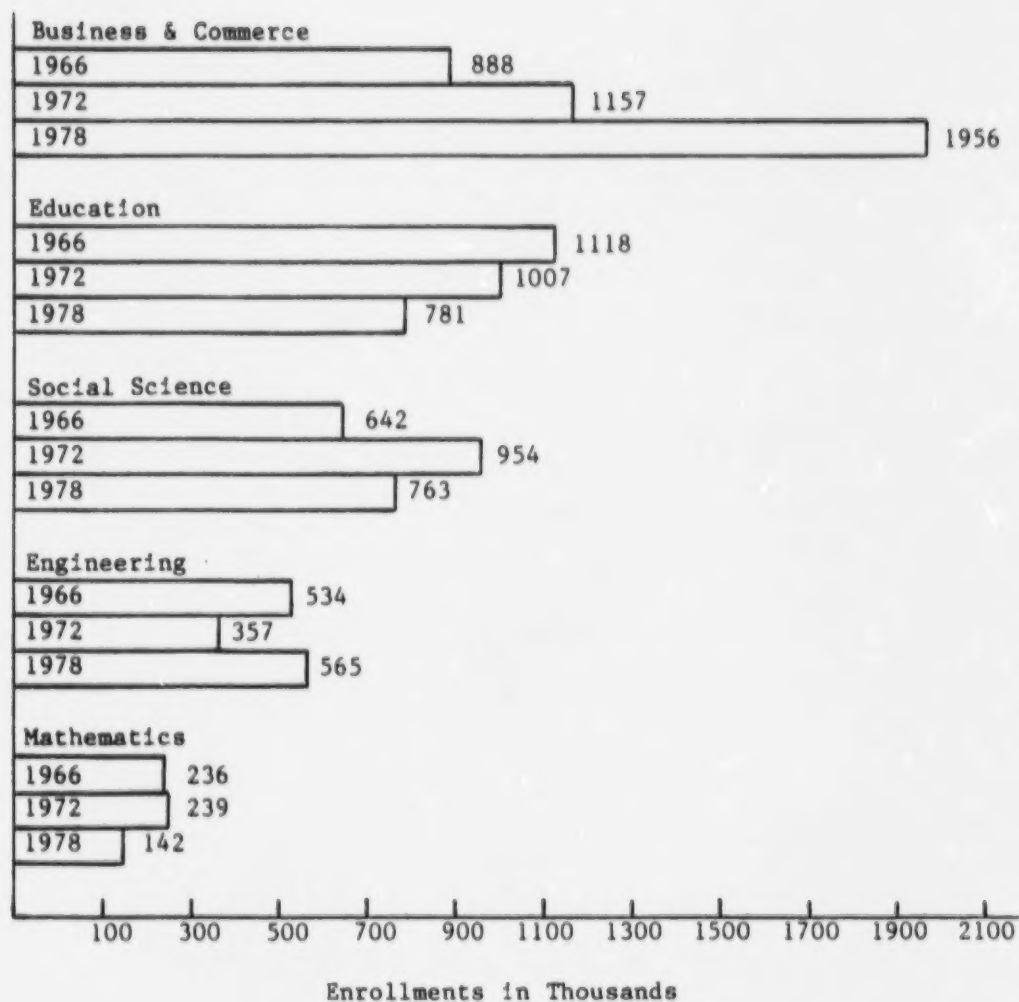


Figure 3. Enrollments of Students 14 to 34 Years of Age in Selected Major Fields in Institutions of Higher Education in the United States, 1966, 1972, 1978

Data Source: National Center for Educational Statistics (1981, p. 100)

organization. Part-timers operate at the very boundary of the college's social system. They frequently teach at off-campus locations scattered throughout the community and often at times which preclude their interaction with their full-time counterparts (Bonham, 1982, p. 11; Leslie et al., 1982, p. 85). This limited interaction can be expected to decrease the propensity of the part-timer to identify with the organization (March & Simon, 1958, p. 66).

Organizational identification. Identification, according to March and Simon (1958, p. 65), is important in motivating an individual to conform to group norms. Group norms, along with expectations, define the role of the employee (Getzel & Guba in Hoy & Miskel, 1982, p. 59; Lawless, 1979, p. 315). If the part-time employee is denied the opportunity to experience group normative influences, as the research indicates (Abel, 1976, p. 11; Bagwell & Elioff, 1981, p. 17; Bonham, 1982, p. 11; Hoenninger & Black, 1978, p. 26; Kennedy, 1967, p. 15; Leslie et al., 1982, p. 85; Magarrell, 1978, p. 6), then formal communication of organizational expectations should take on additional importance. Unfortunately, the evidence indicates that, except in isolated cases, expectations are not being communicated.

Significantly, Leslie et al. (1982, pp. 81-82) found that 84% of colleges and universities provide no formal orientation for part-timers. Relatively few institutions (about 20%) provide information about students or teaching methods. In fact, slightly fewer than half

of their survey respondents reported making syllabi available for new part-timers.

Although community colleges seem to be more committed than other institutions of higher education to providing some form of orientation for part-timers, Leslie et al. (1982, pp. 81-82) found that only 31% provide a formal one. Administrators identify lack of time as a leading impediment to effective part-time orientation (Scheibmeir, 1980, p. 90).

Despite some exemplary orientation and development programs (Decker, 1980, p. 64; McDougale, 1980, p. 22; Parsons, 1980, pp. 48-52; Pierce & Miller, 1980, pp. 38-39), the preponderance of evidence suggests that socialization is not effectively achieved for part-timers in most colleges. As a result, many are unfamiliar with services available to themselves and to their students and are unfamiliar with college policies and expectations (Hoenninger & Black, 1978, p. 25).

Status. Prestige of the group, according to March and Simon (1958, p. 65), is also a motivating factor in job performance. However, even if colleges are considered prestigious places to work, part-timers as a group are relegated to the bottom of the status ladder (Abel, 1976, pp. 6, 10; Blank and Greenberg, 1981, p. 10; Guthrie-Morse, 1979, p. 10; McQuade, 1981, p. 29; Watkins, 1982, p. 1). The National Education Association recently described part-timers as a "corps of unregulated personnel" that can be "exploited by unscrupulous administrators and boards of trustees" to exclude career

professionals from available positions (Leslie et al., 1982, pp. 60-61). The fact that part-time selection procedures are informal and haphazard (Cohen & Brawer, 1982, p. 72; Leslie et al., 1982, p. 73; Scheibmeir, 1980, p. 75) adds to the low prestige stigma carried by part-time staff.

Performance evaluation. Feedback serves important motivational functions and can connect organizational identification and interaction (March & Simon, 1958, p. 68). Moreover, formal and informal feedback procedures reinforce appropriate social behavior (Hoy & Miskel, 1982, p. 66). When provided in terms of a clear knowledge of results (success or failure), feedback is used by the individual in establishing or altering his or her level of aspiration for future output (Lawless, 1979, p. 142). Expectancy theories of motivation relate employee motivation to the knowledge that one is achieving something and that performance verified by others will lead to rewards (Hampton in Hampton, Summer, & Webber, 1982, pp. 5-8; Vroom in Hoy & Miskel, 1982, p. 157). Yet, in many settings, evaluation simply does not occur; in others, it is not as systematic as it is for the full-time faculty (Bender & Breuder, 1973, pp. 35-36; Bender & Hammons, 1972, p. 22; Bonham, 1982, p. 11; Cohen & Brawer, 1977, p. 58; Kennedy, 1967, p. 15; Lolley, 1980, p. 48; Marsh & Lamb, 1975, p. 26; McFarland, 1982, p. 7; Sewell et al., 1976, p. 14).

Jim Hammons (1981, p. 48) reports that, in his experience with more than 100 colleges during the last ten years, he has found part-time faculty evaluation practices of most colleges to be either

nonexistent or in need of radical revision. Leslie et al. (1982, p. 83) found evaluation efforts existing in only a small percentage of the institutions in their study. Scheibmeir (1980, p. 92), to no great surprise, reports that administrators admitted that evening and off-campus part-timers were the most awkward to assess. Lacking such feedback and supervision, most administrators would be hard-pressed to use this basis for quality assurance.

Length of service. March and Simon (1958, p. 73) report that, excluding the first year, the longer the service with a given organization, the stronger the identification of the individual with the organization. Community colleges generally recognize and reward full-time instructors for length of service by the construction of salary schedules. Part-time instructors, on the other hand, are usually paid a flat rate per course or per term without recognition for either teaching experience or longevity (Abel, 1976, pp. 6, 13; Hammons, 1981, p. 47; Leslie et al., 1982, p. 77; McIntyre, 1982, p. 2). As one might predict, part-timers as a group have less experience at the college where they teach than do their full-time counterparts (Abel, 1976, p. 12; Friedlander, 1979, p. 67; Friedlander, 1980, pp. 29-30).

The transient nature of the part-time faculty member is widely known. Howard Tuckman (1981, p. 8), who conducted research for the American Association of University Professors on the use of part-time faculty in American institutions of higher education, has labelled the 1980's as "the era of the gypsy faculty." In fact, this high turnover

rate presents severe challenges to employee orientation and motivation (Ernst & McFarlane, 1978, p. 95; McFarland, 1982, p. 3) and adds to the question of quality assurance.

Career orientation. It was Max Weber's hypothesis (Hoy & Miskel, 1982, p. 82) that a career orientation for employees would lead to a more efficient and productive organization. March and Simon (1958, p. 63) add that upward mobility in the organization is an important motivator. The ties between the part-timer and the organization are, however, evanescent. Leslie et al. (1982, p. 44), in their Exxon Foundation study of part-time instructors, found little evidence that a part-time position leads eventually to full-time employment. It would appear that many of the careerist aspirations of part-timers are destined to be unrealized. In fact, many of these part-time instructors could be classified into a group which Gouldner (Hoy & Miskel, 1982, p. 115) labels "outsider cosmopolitans." In a real sense, they are in, but not of, the organization. They are committed to their specialized subject matter, and their reference group is almost exclusively outside the organization (Bramlett & Rodriguez, 1982/83, p. 40). This type of employee generally has little loyalty to the organization (Gouldner in Hoy & Miskel, 1982, p. 115).

Coordination. James Thompson (1967, p. 54) and Henry Mintzberg (1979, pp. 21-24) emphasize the importance of structure to coordinate the actions of organizations. Organizational components are interdependent, if only in the sense that, unless each performs

adequately, the total organization is jeopardized. This "pooled" interdependence is exemplified by the relationship that the part-time instructor who teaches an upholstery class in the community has with other members of the institutional staff. To his students, he represents the college, and to the extent that he succeeds or fails, so has the institution.

Interdependence can also take a "sequential" form (Mintzberg, 1979, p. 22; Thompson, 1967, p. 54). Leslie et al. (1982, p. 85) report that the consequence of lack of coordination between part- and full-time faculty can be disastrous in sequential courses in which students sometimes register for a course without the prerequisite knowledge or skills because their introductory sections did not keep pace. Coordination is especially critical in academic departments in community colleges, where S. D. Roueche and V. N. Comstock (1981, p. 1-51) found a preponderance of part-time faculty teaching basic and introductory courses, while the full-time faculty teach upper levels.

The third form of interdependence, which Thompson (1967, p. 55) labels "reciprocal," operates between these groups to the extent that students enroll in classes taught by both full-time and part-time instructors. The progression is not always from classes taught by part-timers to classes taught by full-timers, but can be reversed.

When interdependence is important, concerted action comes about through coordination processes. Thompson (1967, p. 56) proposed that there are distinct parallels between the three types of

interdependence and three types of coordination. With pooled interdependence, coordination by standardization is appropriate; with sequential interdependence, coordination by plan is appropriate; and with reciprocal interdependence, coordination by mutual adjustment is called for.

Standardization is achieved by the establishment of routines or rules which constrain action of each unit or position into paths consistent with those taken by others in the interdependent relationship. Plans involve the establishment of schedules for the interdependent units by which their actions may be governed. Mutual adjustment requires the establishment of an effective system of communication. Since all three interdependent relationships exist between full- and part-time instructors, all three coordination mechanisms are called for. Unfortunately, the literature reveals few instances of effective attempts to coordinate the efforts of employees. As John Lombardi (Hoenninger & Black, 1978, p. 25) noted in his 1975 study of part-time faculty in community colleges, aside from the name of the text, the location of the classroom, and occasionally a course syllabus, part-time instructors get little orientation or in-service training. Bender and Breuder (1973, p. 34), Bender and Hammons (1972, p. 21), Blank and Greenberg (1981, p. 11), Cooke and Hurlburt (1976, p. 17), and Moe (1977, p. 39) report similar findings. Coordination between full- and part-time faculty is further complicated by the fact that many part-timers teach off-campus and in the evening.

According to Mintzberg (1979, p. 348), standardization of teacher skills is the only coordination mechanism which can be effective under these circumstances. Mintzberg classifies community colleges, along with other human service organizations, into a type which he labels the "professional bureaucracy." In this type of organization, professionals (teachers) are hired to work relatively independently of colleagues and supervisors, but closely with the clients (students). Coordination is achieved because these professionals are highly trained and indoctrinated prior to their employment (Mintzberg, 1979, p. 350).

Employee selection. Given this framework, one might expect to find a great deal of attention paid to part-time faculty selection. However, Leslie et al. (1982, p. 73) found quite the contrary to be true. Almost one fifth of the institutions they studied report no active recruitment of part-time faculty. Part-time recruitment and hiring, they found, were done mostly on the personal level. Acquaintances and community contacts seem to be the most important sources of candidates.

Scheibmeir (1980, p. 75) found that the colleges he sampled readily admitted that selection procedures were not the same for full- and part-time faculty. Procedures for recruiting and hiring full-time faculty are more formal, more rigorous, more in-depth, and more advertised. They normally last longer and involve more people than part-time faculty selection procedures.

Other studies also point out that part-timers are employed less carefully than are full-timers (Bender & Breuder, 1973, p. 32; Bender & Hammons, 1972, p. 21; Marsh & Lamb, 1975, p. 21; Tuckman, 1981, p. 9). The rationale given by Cohen and Brawer (1982, p. 72) is that because the institutions are making no long-term commitment to these employees, decision-makers do not see the need to spend a great deal of time and money in selection processes.

Quality control. From an organizational perspective, one could conclude that guarantees of quality control in the use of part-time instructors would be weak. Opportunities for direct supervision are minimal; employee turnover is high; evaluations are not consistently performed; prestige in the organization is low; part-time employees are not well oriented to the institutions; there is little opportunity for staff development; the teaching process is not standardized; and there is not much effort placed on insuring standardization of qualifications in the selection process. To the extent that institutional practices in these areas favor full-timers, the equal effectiveness of part- and full-time faculty is brought into question.

Faculty Qualifications

Traditionally, institutions of higher education have held that teaching effectiveness is related to educational attainment and experience. These factors play a significant role in initial employment and tenure considerations. Furthermore, salary schedules

are often constructed to reward full-time faculty for their degree attainment, additional units of coursework completed, and experience in teaching or in a vocation related to the discipline taught. By these measures, full-time faculty appear to hold higher academic degrees and are more experienced teachers, whereas part-timers have more nonacademic experience (Andes, 1981, p. 11; Bagwell & Elloff, 1981, p. 17; Bender & Hammons, 1972, p. 22; Cohen & Brawer, 1977, p. 60; Cohen & Brawer, 1982, p. 71; Cooke & Hurlburt, 1976, p. 16; Friedlander, 1979, p. 67; Friedlander, 1980, pp. 29-30; Grymes, 1976, pp. 8, 41; Kellams & Kyre, 1978, pp. 19-21; Magarrell, 1978, p. 6; McClelland, 1981, p. 13; McFarland, 1982, p. 3; McIntyre, 1982, p. 51; Tuckman, 1981, p. 9).

One criticism frequently advanced against the hiring of part-time faculty is that, although they may be outstanding in their subject area, they are not trained as teachers (Cottingham et al., 1981, p. 12; Englebert in Bender & Breuder, 1973, p. 30; Grymes, 1976, p. 12; Kuhns, 1963, p. 11). However, there is little evidence to suggest that full-timers differ in this respect. In community colleges, the Master's Degree in a traditional academic department is the most typical preparation for full-time instructors (Cohen & Brawer, 1982, p. 76). Neither group of faculty members is highly trained in teaching skills.

One of the major studies done on comparing teacher qualifications was performed using data from three nationwide surveys conducted by the Center for the Study of Community Colleges in 1977

and 1978. The findings of the study, which sampled 3,272 full-time instructors and 729 part-time instructors, showed that full-time faculty had much more teaching experience than the part-time staff (Friedlander, 1979, p. 67; Friedlander, 1980, p. 29). Over 90% of the former, as compared to 65% of the latter, had at least two years of teaching experience.

The same study revealed that 21% of the part-timers, as compared to 5% of the full-timers, had not earned an academic degree beyond the baccalaureate (Friedlander, 1980, p. 30). McIntyre (1982, p. 29) reports similar findings in the 1982 Report on Faculty Employment issued by the California Community College Chancellor's Office. In that study, which reported the status of 15,753 full-time and 29,879 part-time faculty, 91.2% of the former possess a Baccalaureate Degree, compared to 78.8% of the latter. Nearly 85% of the full-timers have a Master's Degree, as compared to 51.6% of the part-timers.

In a 1979 survey of institutions of higher education in West Virginia, Andes (1981, p. 11) found that, after comparing 2,573 full-time and 1,240 part-time faculty, in general, part-timers have fewer academic credentials (40% M.A. or less), longer practical professional experience, less academic experience, and less theory in their content field.

Using data from two national surveys, conducted in 1968 and 1972, Kellams and Kyre (1978, pp. 19-20) compared the educational and experiential background of 2,362 part-time and 2,393 full-time faculty

members. Their results reveal generally higher levels of education for full-time faculty members. However, part-timers outdistance their full-time counterparts in nonacademic experience and in possession of professional degrees (M.B.A., M.A.T., M.Ed., M.D., D.D.S., and Ed.D.).

Teacher Practices

The surveys conducted by the Center for Community Colleges in 1977 and 1978 also yielded some interesting comparisons of part- and full-time teacher practices. In general, full-time faculty have more control over selection of course materials, require more reading of their students, make more use of instructional media, require more out-of-class activities, make more use of instructional support services, grade more heavily on out-of-class assignments, are more involved in professional activities, and are more available to students (Friedlander, 1979, pp. 68-69; Friedlander, 1980, pp. 30-33).

On the other hand, Abel (1976, p. 14) asserts that part-timers take more time to prepare for individual classes than do full-timers. She found, in her survey of 243 part-time instructors at Santa Monica College, that part-timers spend more time preparing for classes than full-timers could possibly afford.

Selection of course materials. A much greater percentage of part-time than full-time faculty in the surveys conducted by the Center for Community Colleges indicated that they had no say in the selection of instructional materials used in their classes (textbooks, 53% versus 11%; laboratory materials and workbooks, 50% versus 9%; and

collections of readings, 12% versus 5%). It seems safe to assume that many faculty members would find it easier to teach a course based on materials of their own choice than on those selected for them by others. Some support for this assertion comes from the finding that 20% of the part-time faculty and 8% of the full-time faculty, in the surveys, said that their courses could be improved if they had more freedom to choose materials (Friedlander, 1979, pp. 68-69; Friedlander, 1980, pp. 30-33). However, there is no evidence to indicate that teachers who select their own course materials are any more effective than those who don't.

Reading requirements for students. On the average, part-timers in the surveys conducted by the Center for Community Colleges required their students to read 401 pages for a course, while full-timers required 551 pages. However, there is some evidence that these figures are inflated and perhaps meaningless. Friedlander (1980, p. 31) reports that many of the respondents in both instructor groups merely counted all the pages in their textbooks as required reading. Furthermore, there is strong evidence to support the contention that students frequently do not read what teachers assign. In their study of literacy development in community colleges, S. D. Roueche and V. N. Comstock (1980, pp. xii-xiii, I-61) found that students often ignore their textbooks and concentrate on teacher-prepared notes and handouts. In fact, half of the students in a typical freshman course never even purchase the required textbook (Roueche, J. E., 1983,

p. 53). The significance of any difference in reading requirements between types of teachers, then, is questionable.

Use of instructional media. A much greater percentage of full-time than part-time faculty reported that they used some form of instructional media in their classes (45% versus 33%). To illustrate, full-timers are more likely than part-timers to use films (60% versus 46%), overhead projection transparencies (45% versus 30%), scientific instruments (42% versus 28%), slides (39% versus 30%), filmstrips (29% versus 19%), and video tapes (29% versus 15%).

The reasons for these discrepancies are apparent in light of evidence, presented earlier, of weaknesses in orientation, evaluation, and staff development processes for part-time teachers. Furthermore, many part-timers teach in the evening or at remote locations where this instructional equipment may not be available (Bender & Hammons, 1972, p. 22). In fact, Friedlander (1980, p. 31) found that 43% of the part-timers, versus 32% of the full-timers, said they did not have access to media production facilities and/or assistance.

The fact that community college instructors view media as a valuable instructional resource is evidenced by the finding that close to 40% of the faculty indicated that they could make their courses more effective if they had access to more media and/or instructional materials.

Use of out-of-class activities. The full-timers in the study were more likely than part-timers either to recommend or require that their students attend each of eleven types of out-of-class events on

campus or in the community. The largest differences between the two groups were in the percentages who encouraged their students to attend on-campus educational films (42% versus 30%), other films (36% versus 30%), outside lectures (44% versus 34%), television programs (48% versus 41%), theatrical productions (45% versus 33%), and concerts or recitals (38% versus 31%).

An insight into these differences comes from the findings of the 1975 survey, which showed that the part-timers were more than three times as likely than the full-timers to respond "don't know" to questions about college-provided events. Weaknesses in the orientation and socialization processes for part-timers are apparently being reflected in instructional practices.

Use of instructional support services. The full-time instructors in the study were more likely than part-timers to use clerical help (68% versus 51%), library and bibliographic assistance (43% versus 34%), media production facilities or assistance (40% versus 31%), tutors (32% versus 22%), and test-scoring facilities (24% versus 13%).

Not only were the part-timers less likely than full-timers to use most of the support services, they were also less likely to report that the various services were available to them. The Friedlander findings are consistent with those of Cooke and Hurlburt (1976, p. 18), who report that instructional support services are often unavailable to part-time faculty.

Grading practices. A greater percentage of full-time than part-time faculty in the study based their grades on student activities which required out-of-class time to grade. These activities included quick-score objective tests (73% versus 64%), essay examinations (61% versus 53%), field reports (13% versus 11%), and workbook completion (16% versus 11%). Conversely, a smaller percentage of full-timers than part-timers based their grades on student activities that could be graded in class. These included oral reports (26% versus 30%), participation in class discussions (46% versus 55%), and regular class attendance (41% versus 51%). There were no differences detected in the percentages of part-time and full-time instructors who based their grades, in part, on papers written out of class (45%) and on papers written in class (20%).

Involvement in professional activities. A higher percentage of full-time than part-time faculty in the study reported that they read scholarly journals (77% versus 67%) or professional education journals (39% versus 26%). A higher percentage of full-timers reported that they belonged to a professional organization (82% versus 63%), attended a professional meeting (48% versus 38%), or presented a professional paper (11% versus 8%). Magarrell (1978, p. 6) adds that part-timers are less likely to engage in research or publication. Shay, Preising, Cherdack, Scott, Berg, Denney, and Segalla (1978, p. 14) confirm these findings that part-timers report a much lower frequency of involvement in out-of-class professional functions than did their full-time counterparts.

Availability to students. Although it was not detected in his study, Friedlander (1980, p. 33) points to institutional practices, such as lack of office space for part-timers, to imply that part-time faculty are less available for out-of-class contact with students. Magarrell (1978, p. 6), Grymes (1976, p. 46), and Price and Lane (1976, p. 17) reached similar conclusions. If institutional practices do, indeed, limit contact between part-time faculty and their students, it can be expected that their students will suffer. Wilson, Gaff, Dienst, Wood, and Bavry (1975, p. 107), in their four-year longitudinal study of student and faculty attitudes at eight colleges and universities, found that the single biggest difference between effective faculty and their colleagues was the extent to which they interacted with students outside the classroom.

In partial contrast with Friedlander's findings, Lolley (1980, pp. 47-51) found fewer significant differences in the use of instructional resources between full- and part-time vocational teachers at Tarrant County Junior College, South Campus. The population for the study consisted of 56 full-time instructors who taught 153 courses and 82 part-time instructors who taught 126 courses. The teachers were surveyed for their use of twenty-one instructional resources known to be widely available to community college vocational-technical teachers.

The relative use of each kind of resource was then determined by dividing the total number of courses taught (or maximum possible use factor) into the total number of courses in which the respondent

reported actually using each kind of resource. Of the twenty-one resources which Lolley identified, full-time instructors made better use of twelve, while part-timers made better use of eight. The two groups were identical in their use of government publications. Only six of the differences, however, were statistically significant. Part-timers utilized departmentally owned books, personally owned books, and departmentally prepared syllabi to a significantly greater extent than full-timers, while the full-time faculty utilized self-prepared syllabi, library printed materials, and student interviews of practitioners significantly more than did their part-time counterparts.

The findings reported by Friedlander (1979, pp. 65-72; 1980, pp. 27-35) and Lolley (1980, pp. 49-51) indicate that part-timers differ from full-timers on many measures related to teacher practices. If it is assumed that these factors affect instructional effectiveness, they should be reflected in measures of student achievement and persistence.

Student Evaluations

Studies based upon student evaluations have not, for the most part, detected any significant difference in the quality of instruction delivered by part- and full-time faculty (Cohen & Brawer, 1982, p. 72; Cruise et al., 1980, p. 54; Grymes in Leslie et al., 1982, p. 16; Krauss in Bender & Breuder, 1973, p. 31; Krauss in

Cottingham et al., 1981, p. 13; Overall & Cooper, 1981, p. 5; Willett, 1980, p. 28).

In their comparison of part-time and full-time instructors at a midwestern community college, Cruise et al. (1980, pp. 52-56) utilized a questionnaire designed by the college's office of student affairs. The same personnel administered the questionnaire to 14,996 students during the Fall and Spring semesters of 1975/76. Full-timers taught 9,791 of these students, while 5,205 of them were enrolled in classes taught by part-time instructors.

Of the twenty-three statements on the student evaluation form, full-time teachers were rated higher on sixteen items, and part-time instructors were rated higher on seven items. The Mann-Whitney U-Test was used to determine if any of these differences were statistically significant. The test utilized the mean score for all the questions for both group of teachers. A Z score of 1.96 was needed to reject the null hypothesis at the .05 level of significance, whereas the test yielded a Z score of 1.52. Therefore, the researchers concluded that, while there were some differences on individual items, there were no statistically significant differences between the two groups of evaluations as a whole (Cruise et al., 1980, p. 55).

In her comparison of student ratings of part- and full-time faculty at Elgin Community College, Willett (1980, pp. 23-29) used a course evaluation questionnaire (CEQ) developed at the University of Illinois by Aleamoni and Spencer in 1973. The CEQ was comprised of twenty-three items and utilized a Likert-type response category

(strongly agree to strongly disagree) for each item. Mean scores for items were calculated by weighting the responses 4, 3, 2, or 1. The twenty-three items were grouped into seven scores: six subscores (course attitude, method, course content, interest, instructor, and specific items) and a total score. The seven mean scores from the sampled courses were the units of analysis for the student ratings.

Because seven dependent measures existed on the student rating of teaching effectiveness, a multivariate analysis of variance (MANOVA) procedure was used to detect differences in the student populations. A total of 1,226 students were enrolled in fifty-two class sections taught by full-time faculty, while 1,245 students were taught by part-time instructors in fifty-two matched class sections.

Students taught by part-time instructors rated their courses higher on each of the seven dependent measures of effectiveness. However, none of these differences was statistically significant.

In the only study using student evaluation data which detected significant differences between full- and part-time faculty, Overall and Cooper (1981) studied graduate business administration students at a comprehensive state university and at a private research university in California during the 1979/80 academic year. Average ratings on each item were calculated by class. Means of the combined rating averages by item by instructor type (full- or part-time) were then calculated. Course and instructor ratings were further divided into those for quantitative (accounting, economics, finance, and operations research) and non-quantitative (management theory, organizational

theory, and social/legal aspects) classes. T-tests of mean differences between full-time and part-time faculty ratings in quantitative and non-quantitative courses were performed.

Because the evaluation questionnaires at both universities were similar, a comparison of results between universities was possible. Both questionnaires contained items that related to the rating dimensions of enthusiasm, examinations/grading, interaction, learning, organization, and rapport. Both also contained overall course and instructor rating items.

In the quantitative courses at the state university, part-time faculty rated higher than their full-time counterparts in fourteen of the eighteen rated items. None of these differences was statistically significant, however. In the non-quantitative courses at the state university, the part-timers out-distanced the full-timers on sixteen of the eighteen rated items. Three of these differences were found to be statistically significant. Part-timers rated significantly higher in the dimensions of enthusiasm, interaction, and rapport.

At the private research university, full-time faculty teaching quantitative classes were rated higher on ten of thirteen items. Three of these differences were found to be statistically significant. Full-time faculty rated significantly higher on the dimensions of enthusiasm, learning, and rapport. In the non-quantitative courses at the private research university, full-time faculty were rated higher than part-timers on all thirteen items. All of these differences were

statistically significant except for the item relating to "seeking help/advice encouraged?"

In attempting to explain the lack of consistency between the results obtained at the two research sites, Overall and Cooper (1981, pp. 3-5) offer some speculations. First, it is probable that the characteristics and motives for teaching of the full- and part-time faculty members employed by the state institution differ systematically from the characteristics and motives of their counterparts at the private research university. For example, it is likely that each institution poses different employment qualifications for its full- and part-time staff. In this particular sample, the private university, as a member of the American Assembly of Collegiate Schools of Business, was bound by different employment guidelines than was the non-member state university.

A second explanation would suggest that the different types of students admitted to each school might affect their perceptions of faculty performance. At the private research university, minimum performance levels required on the Graduate Management Admissions Test differed significantly from the requirements at the state university. Also, students' background characteristics and rationales for pursuing their degrees were different. In this particular sample, the ratio of full- to part-time students at the private institution was much higher than that for the state university, as was the number of students who were not concurrently employed.

This latter explanation indicates that part-time faculty might be more effective in teaching the less-prepared part-time students who are employed during their college careers, while full-time faculty might be more effective teaching more highly prepared full-time students who have no competing obligations.

Self- and Supervisory Evaluations

In their 1975/76 comparison of full- and part-time instructors at a midwestern community college, Cruise et al. (1980, pp. 52-55) also examined differences in self- and administrative evaluations of faculty. Of the nineteen statements on the self-evaluation form, full-time instructors had higher scores on eleven of the statements, while part-time teachers scored higher on eight of the statements. These differences, however, were not found to be statistically significant (Z score = .12).

The administrator's evaluation form consisted of fourteen statements. The full-time teachers were rated higher on ten of the items while part-time teachers were rated higher on four items. These differences, too, were found not to be statistically significant (Z score = .94).

Student Retention and Achievement

In her comparison of the instructional effectiveness of full- and part-time faculty at Elgin Community College, Willett (1980, pp. 23-30) also measured student retention and achievement for both

groups. A total of fifty-two part-time and fifty-two full-time faculty were randomly selected from instructor lists. Class sections taught by part-time faculty were then matched by course and semester with equivalent class sections taught by full-time faculty.

Course retention proportions were calculated by dividing the number of students enrolled in the class (after the first week of classes) into the number of students who received passing grades (A through D) in that course.

The Z test for proportions was used to test the retention differences in courses taught by full- and part-time teachers. Overall proportions were calculated for the full-time and part-time course sections. Of the 1,226 students taught by full-timers, 82.3% were retained, while 80.3% of the 1,245 students taught by part-timers persisted. This difference, however, was not found to be statistically significant (Z score = 1.27).

Student achievement in subsequent classes was measured by grades earned in those classes. For each introductory class in the original sample, the subsequent advanced class was selected. For example, students enrolled in Art 120 were followed for one semester to determine if they took the next advanced course in the discipline area. The achievements of these students were weighted: $A = 4$, $B = 3$, $C = 2$, $D = 1$, $E = 0$.

Analysis of covariance (ANCOVA) was used to compare the achievement in subsequent advanced course sections. The covariate was the grade earned in the introductory or first course. The dependent

variable compared was grade earned in the advanced course. Mean scores were calculated and analyzed.

In the sample of twenty-four students who matriculated to advanced classes, those taught by full-time instructors in the introductory class dropped .08 in unadjusted mean achievement scores. Students who had part-time instructors in the introductory class dropped .42 in unadjusted mean achievement scores. These differences, however, were not found to be statistically significant.

Summary

Financial uncertainty and projections of changing enrollment patterns of students are forcing many institutions of higher education into positions of maximum flexibility. As a result, colleges are continuing a trend toward increased reliance on part-time faculty to deliver their services. This trend is noted by full-time faculty as cause for alarm.

Allegations of poorer quality instruction provided by part-time instructors cannot be documented. Research studies based upon faculty qualifications, teacher practices, student evaluations, self-evaluations, supervisory evaluations, student retention, and student achievement are conflicting and show no clear pattern of differences in teaching effectiveness between the two categories of teachers.

However, it is clear that part-time employee practices in the areas of selection, orientation, evaluation, and staff development need improvement. Weaknesses in organizational efforts to provide

services to part-time faculty and opportunities for their socialization and role identification have been pointed out. Furthermore, colleges have not provided sufficient opportunities for part-time and full-time instructors to coordinate their activities.

The conflicting interests--of students who are demanding new services and non-traditional structures, of the public which is setting funding limitations while demanding accountability, of full-time instructors who view the intrusion of increasing numbers of part-timers with apprehensions for quality control and their own security, and of college administrators who are under attack for their motives and for their lack of ability to guarantee quality control in this fluid and dispersed work-force--seem at this point to defy resolution. Various authors have recommended increased supervision and evaluation, improved orientation and staff development practices, and increased reimbursement rates for part-time instructors. Some suggest a limit on the ratio of part-time to full-time faculty in an institution in order to permit effective management. At this point, however, there are no data which suggest what that effective limit might be.

The literature and research on part-time instructors leave us with many unanswered questions. Perhaps the only thing we can say with any degree of certainty is that the issue will remain a focus of attention for college practitioners and researchers well into the foreseeable future.

CHAPTER III

Methodology and Procedures

Data Collection

Data were collected to form two data files. The primary file contains data on every student who has taken freshman composition (ENG 210) at Butte College between Winter quarter 1979 and Fall quarter 1983 (20 instructional terms). This file, consisting of 3497 student enrollment cases, includes: student identification number, student gender, ENG 210 class master number, the quarter ENG 210 was taken, the year ENG 210 was taken, the time of day that the ENG 210 class began, the ENG 210 class meetings per week, the location of the ENG 210 class, the ENG 210 class size, the ENG 210 teacher identification number, the ENG 210 teacher gender, part- or full-time status of the ENG 210 teacher, the grade the student received in ENG 210, the units the student completed while taking ENG 210, the units completed at Butte College as of Summer 1983, the student's Butte College grade point average as of Summer 1983, the high school the student last attended, the student's high school grade point average, the student's ACT English score, the student's SAT verbal score, the student's score on the Nelson-Denny reading assessment test, and the student's score on the Stanford Task English and Reading assessment tests.

If the student took a previous developmental writing (ENG 102) class, data were recorded including ENG 102 master number, the quarter the student took ENG 102, the year the student took ENG 102, the time of day the ENG 102 class began, the ENG 102 class meetings per week, the location of the ENG 102 class, the ENG 102 teacher identification number, the ENG 102 teacher gender, part- or full-time status of the ENG 102 teacher, and the units the student completed while taking ENG 102.

The secondary data file contains data on every ENG 102 class taught at Butte College from Fall 1975 through Summer 1983 (32 instructional terms). This file, consisting of 191 class cases, includes the ENG 102 master number; the quarter the class was offered; the year the class was offered; the time of day the class began; the number of class meetings per week; the location where the class was taught; the teacher identification number; the teacher gender; the part- or full-time status of the teacher; and the number of credit (CR) grades, no-credit (NC) grades, withdraw (W) grades, and incomplete (I) grades assigned by the teacher.

Data for the two files were collected from grade sheets, student personnel files, assessment office records, student transcripts, schedules of classes, and microfilmed records. As such, the data are properly classified as archival. With the exception of grade point averages, placement and achievement test scores, class size, units completed, and terms between courses, the data are

categorical. Data structures for the two files are shown in Tables 3 and 4 on pages 54 and 55.

Primary Data File

Data were recorded on 3497 cases of student enrollments in ENG 210 from Winter quarter 1979 through Fall quarter 1983. Student name and identification number; student gender; ENG 210 class master number; the quarter, year, and time of day of the ENG 210 class; the class enrollment; the ENG 210 instructor name, identification number, gender, and part- or full-time status; and the student's grade in ENG 210 were recorded from the ENG 210 grade sheets. Student transcripts were then examined to determine whether the student had taken a previous ENG 102 class and to record the units completed while taking ENG 210, the units completed at Butte College as of Summer 1983, and the student's Butte College grade point average as of Summer 1983. Student personnel files were examined to record which high school the student had last attended; the high school grade point average; and the student's scores on the ACT English test, the SAT verbal test, and the Nelson-Denny reading test. Stanford Task English and Reading assessment test scores were recorded from assessment office records. Class location and beginning times were recorded from archival class schedules. Microfilm records were used to record data on students whose files were inactive.

If the student had received a credit grade in a previous ENG 102 class, the quarter and year of the student's enrollment were

TABLE 3
Primary Data File Structure

1 -	1.	STID	- student identification number
1 -	2.	SSEX	- student gender
1 -	3.	CON210	- ENG 210 class master number
1 -	4.	QTR210	- quarter the ENG 210 class was taken
1 -	5.	YR210	- year the ENG 210 class was taken
1 -	6.	TIM210	- time of day the ENG 210 class began
1 -	7.	MT210	- ENG 210 class meetings per week
X -	8.	LOC210	- ENG 210 class location
1 -	9.	SIZ210	- ENG 210 class enrollment
1 -	10.	INS210	- ENG 210 instructor code
1 -	11.	SEX210	- ENG 210 instructor gender
1 -	12.	TYP210	- ENG 210 instructor part- or full-time status
1 -	13.	GR210	- student grade in ENG 210
2 -	14.	UNI210	- units completed while taking ENG 210
3 -	15.	CON102	- ENG 102 class master number
2 -	16.	QTR102	- quarter the ENG 102 class was taken
2 -	17.	YR102	- year the ENG 102 class was taken
3 -	18.	TIM102	- time of day the ENG 102 class began
3 -	19.	MT102	- ENG 102 class meetings per week
X -	20.	LOC102	- ENG 102 class location
4 -	21.	SIZ102	- ENG 102 class enrollment
4 -	22.	INS102	- ENG 102 instructor code
4 -	23.	SEX102	- ENG 102 instructor gender
4 -	24.	TYP102	- ENG 102 instructor part- or full-time status
2 -	25.	UNI102	- units completed while taking ENG 102
2 -	26.	BCUNIT	- units completed at Butte College as of Summer Session 1983
2 -	27.	BCGPA	- Butte College grade point average as of Summer Session 1983
5 -	28.	HS	- code for last high school attended
5 -	29.	HSGPA	- high school grade point average
5 -	30.	ACT	- score on English section of the ACT
5 -	31.	SAT	- score on verbal section of the SAT
5 -	32.	NEL	- score on the Nelson-Denny reading assessment examination
6 -	33.	ENGPL	- score on the Stanford Task English assessment examination
6 -	34.	RDGPL	- score on the Stanford Task Reading assessment examination
	35.	TRM210	- term the student enrolled in ENG 210
	36.	TRM102	- term the student enrolled in ENG 102

1 = GRADE SHEETS - H.S.
2 = TRANSCRIPTS - CORN.
3 = SCHEDULES - H.S.
4 = GRADE SHEETS - H.S.
5 = SPS FORMS - H.S.
6 = PLACEMENT OFFICE FILES
H.S.

X = General
Schedules

TABLE 4

Secondary Data File Structure

1. CON102 - ENG 102 class master number
2. QTR102 - quarter the ENG 102 class was scheduled
3. YR102 - year the ENG 102 class was scheduled
4. TRM102 - term the ENG 102 class was scheduled
5. TIM102 - time of day the ENG 102 class began
6. MT102 - ENG 102 class meetings per week
7. LOC102 - ENG 102 class location
8. INS102 - ENG 102 instructor code
9. SEX102 - ENG 102 instructor gender
10. TYP102 - ENG 102 instructor part- or full-time status
11. CR - number of credit grades assigned in the class
12. NC - number of no-credit grades assigned in the class
13. W - number of withdraw grades assigned in the class
14. I - number of incomplete grades assigned in the class

recorded from the student's transcript. If the student had repeated ENG 102, data were recorded only on the most recent successful class completion prior to the ENG 210 class. The number of units which the student completed while taking the ENG 102 class was also recorded from the transcript. The student was then traced by name and identification number through the ENG 102 grade sheets for the appropriate quarter and year to record data on ENG 102 master number, the number of class meetings per week, the class enrollment, the instructor name and identification number, the instructor gender, and the part- or full-time status of the instructor. Class location and time of day the class began were recorded from archival class schedules. Quarters and years of class offerings were used to code term identification numbers, which were later used to compute the number of terms between classes.

Secondary Data File

Data were recorded on 191 cases of ENG 102 classes from Fall quarter 1975 through Summer Session 1983. The course master number, the quarter the class was offered, the year the class was offered, the time of day the class began, the number of class meetings per week, the class location, the teacher identification number, the teacher gender, the part- or full-time status of the teacher, and the number of credit (CR) grades, no-credit (NC) grades, withdraw (W) grades, and incomplete (I) grades assigned by the teacher were recorded from ENG 102 grade sheets.

Data Analysis

The data files were analyzed using frequency, cross-tabulation, analysis of variance, and multiple linear regression programs available in the Statistical Package for the Social Sciences (SPSS) library of programs. Analyses were carried out on a DEC PDP-11 computer.

Using the primary data file, interaction variables were computed to control for the possible effects changes of time or location between ENG 102 and ENG 210, changes in teacher gender from ENG 102 to ENG 210, and combinations of teacher-student genders in ENG 102 and in ENG 210. Part- or full-time status of the student was calculated using the units completed while the student was enrolled in each course. The definition of full-time student status (12 units and above during a regular term, or 6 units and above during a summer session) used in determining eligibility for financial aid was used in the computation. Status interaction variables were then computed using part- or full-time status of the teacher and part- or full-time status of the student. Another status interaction variable was computed using data on part- or full-time status of the ENG 102 and ENG 210 teachers. A variable was also created to single out those students who had taken both classes from the same instructor. The created variables are shown in Table 5 on page 58.

To correct for differences in individual ENG 210 instructor grading patterns, each student's grade was adjusted by a factor which standardized each ENG 210 instructor's average grade at the overall

TABLE 5

Variables Created Using the Primary Data File

1. DELTAT - terms between ENG 102 and ENG 210 classes
- 2. T210 - day or evening schedule for ENG 210 class
- 3. T102 - day or evening schedule for ENG 102 class
4. TX - interaction between schedules for ENG 102 and ENG 210
5. L210 - on- or off-campus location for ENG 210 class
6. L102 - on- or off-campus location for ENG 102 class
7. LX - interaction between locations for ENG 102 and ENG 210
- 8. TYPX - interaction between part- or full-time status of ENG 102 and ENG 210 instructors
9. SEXX - interaction between genders of ENG 102 and ENG 210 instructors
- 10. GRADE - student grade (A-F) in ENG 210
- 11. PER210 - student persistence (W or non-W grade) in ENG 210
- 12. MIX210 - interaction between student and ENG 210 instructor genders
- 13. MIX102 - interaction between student and ENG 102 instructor genders
- 14. STA102 - student part- or full-time status while taking ENG 102
- 15. STA210 - student part- or full-time status while taking ENG 210
- 16. X102 - interaction between part- or full-time status of student and that of the ENG 102 instructor
- 17. X210 - interaction between part- or full-time status of student and that of the ENG 210 instructor
18. SAME - same or different instructor for ENG 102 and ENG 210

average of 2.64 and each ENG 210 instructor's average student persistence (non-W grades) at the overall average of 82.04%.

Students who had repeated ENG 210 classes in the five-year period of the analysis were detected by listing the cases in ascending order of their student identification numbers and then manually checking the data file for repeating identification numbers. The identification numbers were then recoded to permit a comparison of students who repeated the ENG 210 class with those who didn't.

In the secondary data file, five new variables were computed from the input variable list. Class size was computed by adding the numbers of grades assigned. The percent of each of the assigned grades was calculated using the number of grades assigned and the class size. Table 6 on page 60 lists the variables created using the secondary data file.

Methodology

Because students have not been randomly assigned to treatment and comparison groups, the research methodology is properly classified as quasi-experimental (Kidder, 1981, p. 43). Although the groups are technically classified as non-equivalent, there is little reason to believe that any intervening differences between the groups will have serious impact on the dependent variable measures. Furthermore, differences should be minimized by the longitudinal nature of the research and would have been detected by analysis of the control variables.

TABLE 6

Variables Created Using the Secondary Data File

1. SIZ102 - ENG 102 class enrollment
2. PCTCR - percent credit grades assigned in the class
3. PCTNC - percent no-credit grades assigned in the class
4. PCTW - percent withdraw grades assigned in the class
5. PCTI - percent incomplete grades assigned in the class

The use of archival data to assess the effects of natural treatments has the advantage of being economical, at least in the data collection stage. Another major advantage is the fact that the data have been collected under natural conditions as a part of the necessary operation of the institution. Since they are collected repeatedly, the data lend themselves well to a longitudinal analysis.

Still another advantage is that the gathering of information from such sources does not require the cooperation of the individuals about whom the information is being sought, as does the use of questionnaire and interview formats. Moreover, archival data are particularly well-suited for the study of large-scale or widespread natural phenomena not amenable to investigation in other ways (Kidder, 1981, p. 290).

Furthermore, naturalistic methods result in observations which are more likely to be authentic and well-grounded than are methods which depend upon interventions into the natural course of events. Consequently, there is greater faith that observations are representative of reality (Kidder, 1981, p. 290).

Limitations

It must be recognized that all research designs have inherent strengths and weaknesses. Although qualitative naturalistic designs provide stronger construct and external validity, they often provide poor evidence for causality. Designs of a more experimental and controlled nature strengthen internal validity but may lack external

validity. While the design of this study combines some of the properties of naturalistic and controlled designs, it faces challenges to construct, internal, and external validity.

Construct validity threats. Research has construct validity when it properly identifies the variables under study. The variables must be operationally defined to measure the constructs or concepts which the researcher claims to be studying. Construct validity is strengthened if the inference between the concept and the variable is minimal and if the variable has more than one measure.

Although teaching effectiveness, in this study, will be measured in two ways (student retention and student achievement in a subsequent sequential course), some may question the inference that teachers impact these measures. Ted Newcomb is quoted by Wilbert McKeachie as saying: "There isn't, I'm afraid, much evidence that faculty do have any effect on students" (Wilson et al., 1975, p. v). Statements of this sort arise because little is known about the outcomes of our educational processes. Evaluation has long been the ignored stepchild of the educational function (Rippey, 1981, p. 63).

To be sure, there are many factors which affect student retention and achievement. Conventional wisdom would indicate that effective teaching should be a significant contributor. In fact, despite all of the reasons given by students for leaving college, increased student retention is likely to be an indicator of more and better teaching in the classrooms (Noel, 1978, p. vii). The results of a recent study done by the ACT National Center for the Advancement

of Educational Practices reveal that the most important factor affecting student persistence is the institution's degree of success in individualizing instruction and focusing it on relevant, practical skill-building (Forrest, 1982, p. 36). Certainly, it is the teacher who most directly influences these dimensions. Moreover, Wilson et al. (1975, pp. 104-107), in their study of college professors and their impact on students, have identified teacher characteristics that make a difference in student and faculty perceptions of faculty effectiveness.

Another threat to the construct validity of measuring teacher effectiveness by student achievement is the well-known subjectivity of grade assignments. This is particularly true in grading samples of student writing. Diederich (1974, p. 6), in his study of factors in judgments of writing ability, found that, when fifty-three judges were each asked to grade 300 essays, 101 received every grade from 1 to 9 on a nine-point scale. Ninety-four percent of the essays received at least seven different grades, and no essay received less than five different grades.

In the classroom, from grade school to college, the judge of writing quality is the teacher. This powerful person works in such mysterious and unpredictable ways that to move from one teacher's writing class to another's can be like traveling from Poland to Peru. One teacher grades students down for using the first person singular, another grades them down if they don't. One marks students way up for correctness, another for ideas, still another for an expressive style

or, contrariwise, for a neutral style. Students hold the universal belief that an A paper in one writing section will be a C paper in another, and vice versa. The reason their belief is universal is that it is empirically true (Hirsch, 1980, p. 160).

Dilworth's (1981, p. 17) research in predilection in the assessment of writing helps to explain this wide variance. Over a three-year period, sixty teachers rated thirteen essays, and the ratings were analyzed for patterns of rater preference. The results support the contention that educators are significantly influenced by predilections for either ratiocenerative or impressionistic prose. The preference for order, logic, and explicit sequence by certain raters and for imagery and cumulative impressions by other raters lends support to the hypothesis that there are at least two major predilections among composition teachers.

Despite this challenge to the construct validity of this study by using student achievement as a measure of teaching effectiveness, there is no reason to believe that the variance in predilections between full- and part-time instructors is any different than that among either full-timers or part-timers. Furthermore, it is expected that students become aware of teacher predilections and adjust to them, so that the skills and knowledges gained in the developmental course should still predict success in the freshman composition course. Moreover, grades are the "coin of the realm" in education. They are the commonly accepted standard for measuring student achievement.

Internal validity threats. Research has internal validity when it accurately identifies causal relationships. In the present study, internal validity is threatened to the extent that the design is non-experimental. Because students were not randomly assigned to developmental English classes taught by full- and part-time teachers, there is no real assurance that the students represent equivalent samples prior to the class.

In order to control for the internal validity threat caused by self-selection, the control variables listed in Table 2 were used to detect differences in sample populations. The same set of control variables were used to detect whether an apparent relationship between the independent and dependent variables is in reality caused by an intervening variable. The strength of any causal relationship was measured against the effect of the control variables.

Mortality also challenges the internal validity of the design. If instructors in one group (part- or full-time) are more effective in weeding out students of low ability in the developmental class, their remaining students should show higher retention and achievement in the subsequent freshman composition class. This effect would lead to a spurious correlation between the independent and dependent variables. That is, the relationship would not be caused by teaching effectiveness but by the screening out of high-risk students.

Fortunately, this mortality effect would be detected by higher attrition rates in the developmental course. Analysis of the secondary data file was used to compare attrition rates of part- and

full-time teachers in the developmental course. Furthermore, it is unlikely that part-time and full-time instructors differ significantly in their student retention rates in developmental English. Using a sample of fifty-two part-time and fifty-two full-time instructors teaching matched courses at Elgin Community College, Willett (1980, p. 28) found no significant difference in retention rates.

External validity threats. Research has external validity when it shows something that is true beyond the narrow limits of the study. In other words, it refers to whether the results can be generalized to other populations and to other environmental conditions.

Any differences between full- and part-time instructors that are detected in the present study lead one to pose the question as to whether these results can be generalized to teachers in other subject areas, at other locations, and at other levels of education. Because the study is an in-depth investigation of faculty members in one subject area, at one location, and at one level of higher education, it is particularly susceptible to external validity threats. However, it should be noted that the study was specifically designed to be site- and subject-area-restricted to allow for an in-depth longitudinal study which might detect a difference between effectiveness of full- and part-time teachers.

Moreover, Butte College is typical of many comprehensive community colleges in its use of part-time faculty and in its institutional practices with regard to their employment. It is likely

that the findings will be of interest to many decision-makers and faculty members involved in community college education and in higher education in general.

Data limitations. Unfortunately, Butte College is also typical of many comprehensive community colleges in that data regarding student abilities and readiness have not been collected on any consistent basis. Standardized test scores (ACT and SAT) are not required for admission. Only in the 1982/83 academic year and beyond were students assessed by a standardized placement examination for basic literacy skills.

Although these data were not regularly collected, there are sufficient cases to determine whether full- or part-time instructors are drawing students from equivalent samples of ability. High school grade point average was available for students who forwarded transcripts of high school work upon admission. Butte College grade point average was available for all cases.

Summary

Two data files were created using various archival records available at Butte College. Data were collected on a wide variety of student ability and achievement variables, instructor characteristic variables, and institutional variables. Several interaction variables were computed prior to data analysis. The data files were then analyzed using programs available in the Statistical Package for the Social Sciences library of programs.

In response to threats against the internal validity of the research design, several control variables were used in the analyses. Analysis of the secondary data file was used to detect any differences in attrition rates in the developmental course between the two types of teachers which could have led to a spurious correlation between the independent and dependent variables.

Although the design is subject to challenges to external validity, Butte College is typical of many comprehensive community colleges in its use of part-time faculty and in its institutional practices with regard to their employment. It is likely that the findings will be of interest to many decision-makers and faculty members involved in community college education and in higher education in general.

CHAPTER IV

Presentation and Analysis of the Data

Primary Data File Description

Data were collected, recorded, and analyzed on the 3497 cases of students who enrolled in freshman composition at Butte College from Winter quarter 1979 through Fall quarter 1983. This primary data file contains information on student grade achievement and persistence to course completion in freshman composition as well as the part- or full-time status of the instructors who taught freshman composition and the previous developmental writing class (if taken). In addition, the primary data file includes information on other factors which were identified as potentially influencing student persistence and achievement (see Table 3, page 53).

Student characteristics. The students in this study were somewhat atypical of the average Butte College student. Although the latest data (Fall 1982) reveal that 57.9% of the students attending Butte College are females, the 3497 students who enrolled in freshman composition classes in the five-year period covered by this study were nearly equally divided by gender (see Figure 4, page 70). Based upon units completed, 58.5% of the students in this study were classified as full-time while taking freshman composition (see Figure 5,



Figure 4. Freshman Composition Enrollments by Student Gender

page 72). By comparison, only 38.1% of the students attending Butte College in the Fall of 1982 were enrolled on a full-time basis.

It is likely, however, that the students in the study are representative of the group of students who transfer from Butte College to pursue courses of study at various upper division colleges and universities. While freshman composition is not required for most certificate and associate degree programs, it is a required course for transfer majors.

Today's community college students represent a transient population. Over half (54.3%) of the sample for whom such data were available (3249 cases) last attended high schools outside the service area of the college. It is interesting to note, however, that 92.7% of the students attending Butte College in the Fall of 1982 met the qualifications to be declared legal residents of the college district. Namely, they were citizens of the United States and had been residents of the State of California for one year or more.

Of the students for whom such data were available, the mean high school grade point average was 2.78 on a 4.00 scale (1626 cases); the mean Stanford Task Reading assessment score was 62.2 (459 cases); the mean Stanford Task English assessment score was 57.7 (479 cases); the mean ACT English score was 16.6 (182 cases); the mean SAT verbal score was 406 (567 cases); and the mean Nelson-Denny Reading assessment score was 56.9 (235 cases). The students in this study had, by Summer of 1983, completed an average of 66.8 quarter units at

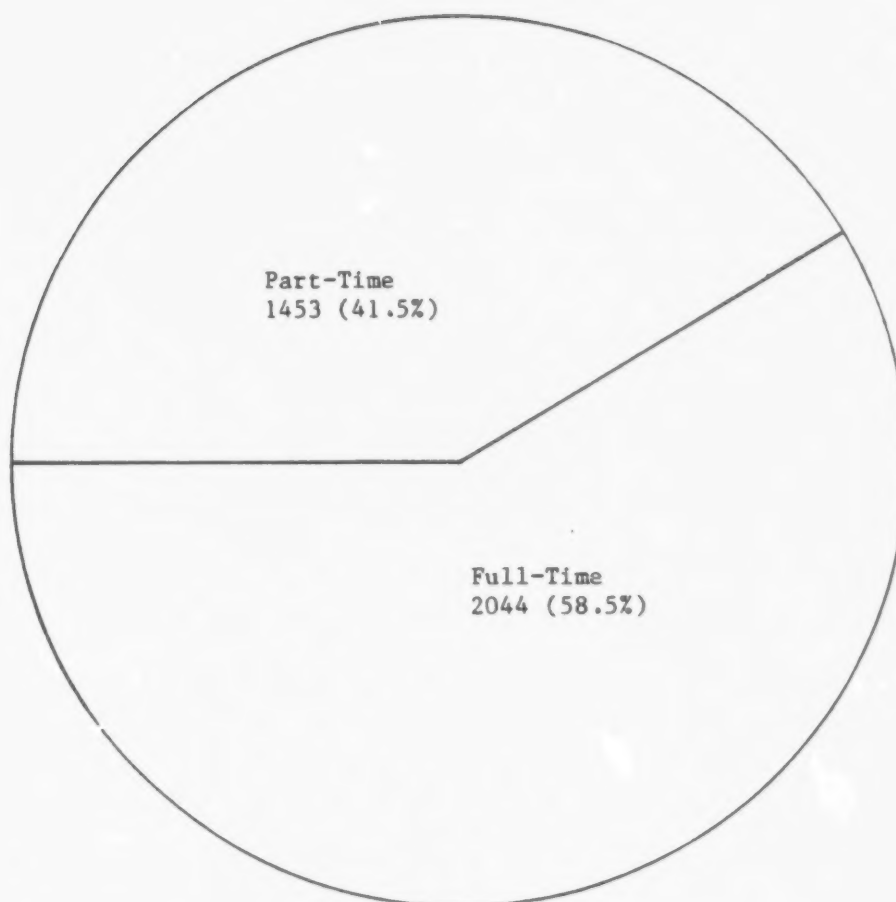


Figure 5. Freshman Composition Enrollments by Student Status While Enrolled in Freshman Composition

Butte College, with a mean Butte College grade point average of 2.82 on a 4.00 scale.

Over 25% of the students who enrolled in freshman composition during the period covered by the study had successfully completed a previous developmental writing class (see Figure 6, page 74). These students scored significantly lower in every measure of prior English language ability (high school grade point averages--2.69 versus 2.82; ACT English scores--13.98 versus 17.50; SAT verbal scores--366.8 versus 420.4; Nelson-Denny Reading assessment scores--47.0 versus 59.6; Stanford Task English assessment scores--51.4 versus 59.2; Stanford Task Reading assessment scores--57.5 versus 63.4). Although this group of students did receive slightly lower grades in freshman composition (2.55 versus 2.67), they were able to persist to completion in the freshman composition at a rate that was not significantly different from that of those who did not take a previous developmental writing class (81% versus 82%). Moreover, the students who completed developmental writing prior to enrolling in freshman composition completed significantly more units while at Butte College (87.2 versus 59.9) and achieved significantly higher Butte College grade point averages (2.88 versus 2.80). Although the students waited an average of 2.8 instructional terms between completing a developmental writing class and enrolling in a subsequent freshman composition class, students most commonly enrolled in the freshman



Figure 6. Freshman Composition Enrollments by Previous Enrollment in Developmental Writing

composition class in the term following completion of their developmental writing class.

Eighty-two percent of the students in this study persisted to course completion in freshman composition (see Figure 7, page 76). The most common grade assigned in freshman composition was B (see Figure 8, page 77). Only 11.1% of the students received D or F grades in freshman composition. Females received more of the A grades (65.4%), while males received more of the D (62.0%) and F (60.6%) grades. However, males and females persisted to course completion in freshman composition at about the same rate (81.1% and 82.9%).

Students who enrolled in freshman composition in the evening were primarily male (58.7%), while those who enrolled in classes taught before 5:00 PM were primarily female (52.9%). Male students were more likely than females to transfer from a day developmental writing class into an evening freshman composition class (64.6%). Male students were also more likely to take both developmental writing and freshman composition classes in the evening (61.0%). Male and female students were equally likely to have taken the classes on- or off-campus.

Of the 880 students who completed a previous developmental writing class, 198 took both developmental writing and freshman composition classes from the same instructor. Staying with the same instructor was not dependent upon student gender nor full- or part-time student status. Neither persistence nor grade in freshman

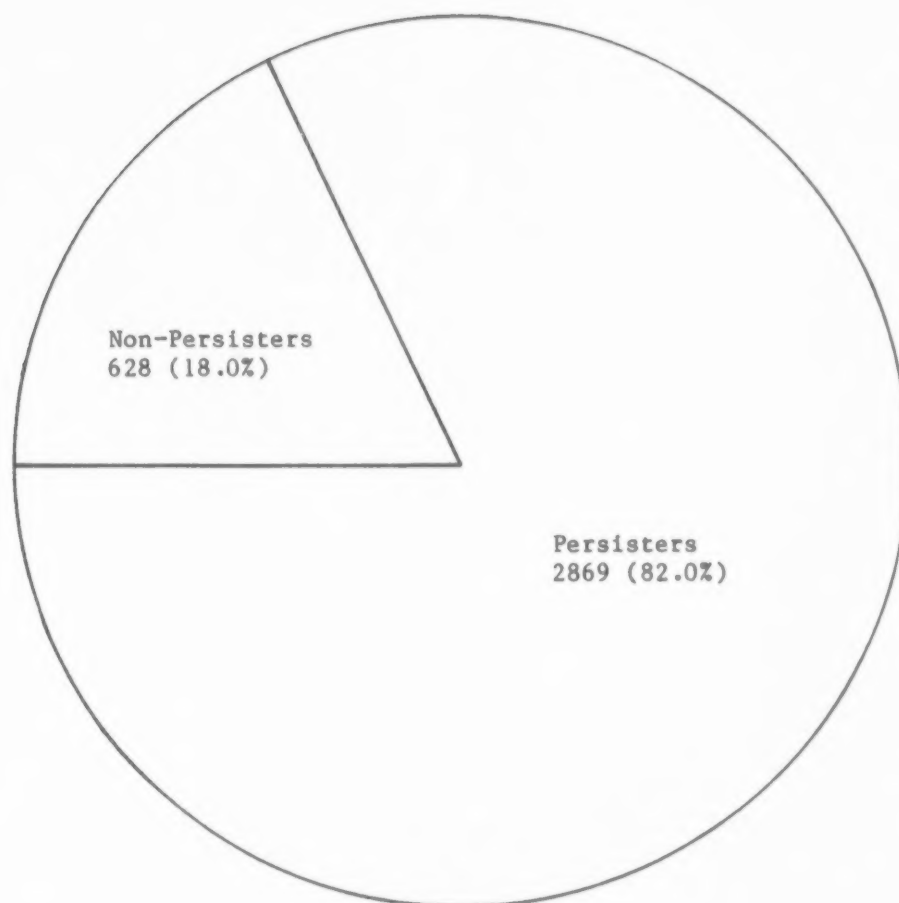


Figure 7. Freshman Composition Enrollments by Course Persistence



Figure 8. Freshman Composition Enrollments by Grade

composition was significantly affected by staying with the same instructor. The students who stayed with the same instructor did not differ significantly in high school grade point averages, ACT English scores, SAT verbal scores, Stanford Task Reading and English scores, Butte College grade point average, units completed while enrolled in freshman composition, units completed while enrolled in developmental writing, or total units completed at Butte College.

Of the 3497 students who enrolled in freshman composition classes during the period of time covered by the study, 224 students repeated the class. Twenty-two of them repeated the class twice, and two students repeated freshman composition three times. The repeaters were mostly day students. They took a previous developmental writing class at about the same rate as non-repeaters. Fifteen of the single repeaters took developmental writing before attempting the freshman composition class again. None of the double or triple repeaters followed this pattern. Males were as likely as females to have repeated freshman composition. The odds were nearly 2 to 1 that a repeater was a part-time student. The percentage of repeaters has dropped since 1982 when standardized assessment and placement procedures were implemented at the college (6.3% in 1979, 6.2% in 1980 and 1981, 5.4% in 1982, 4.6% in 1983). The largest percentage (42.4%) of repeaters were part-time students taking freshman composition from a full-time instructor.

Repeaters showed generally lower persistence and grade achievement in freshman composition than did non-repeaters. However, their student ability measures were not consistently different. While repeaters had lower high school grade point averages (non-repeaters--2.80, single repeaters--2.70, double repeaters--2.59, triple repeaters--2.28), their ACT English scores, SAT verbal scores, Stanford Task Reading and English scores, and Nelson-Denny Reading assessment scores were not significantly different.

Instructor characteristics. Thirty different instructors taught freshman composition during the five-year period covered by this study. No one of them taught more than 14% of the student enrollments. Most of the students in the study (63.4%) had male freshman composition teachers (see Figure 9, page 80). Even more (70.5%) of them took freshman composition from a full-time instructor (see Figure 10, page 81). Both part-time and full-time freshman composition instructors drew nearly equal numbers of male and female students.

As expected, both grade assignment and student persistence in freshman composition varied significantly by instructor. Mean grade assignments by freshman composition instructor ranged from a low of 2.08 to a high of 3.33, with an overall mean of 2.64. Mean persistence ranged from 70.8% to 100%, with an overall mean of 82.0%.

In general, students who took freshman composition from part-time instructors persisted to course completion at a higher rate and

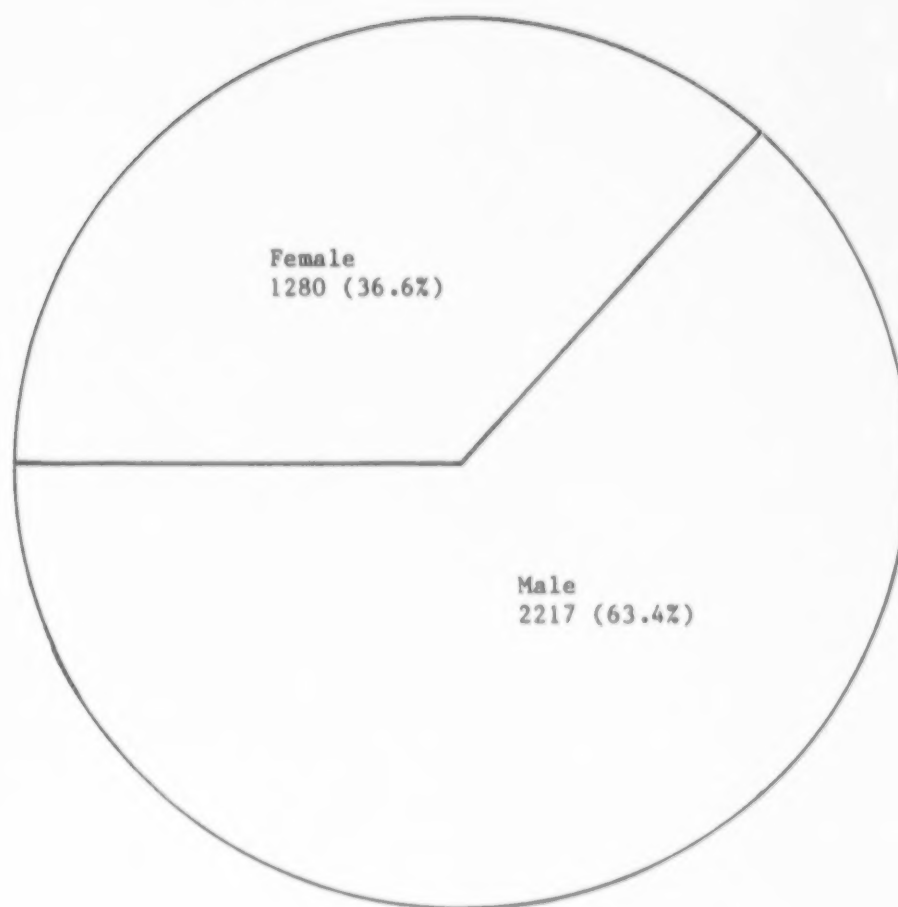


Figure 9. Freshman Composition Enrollments by Instructor Gender

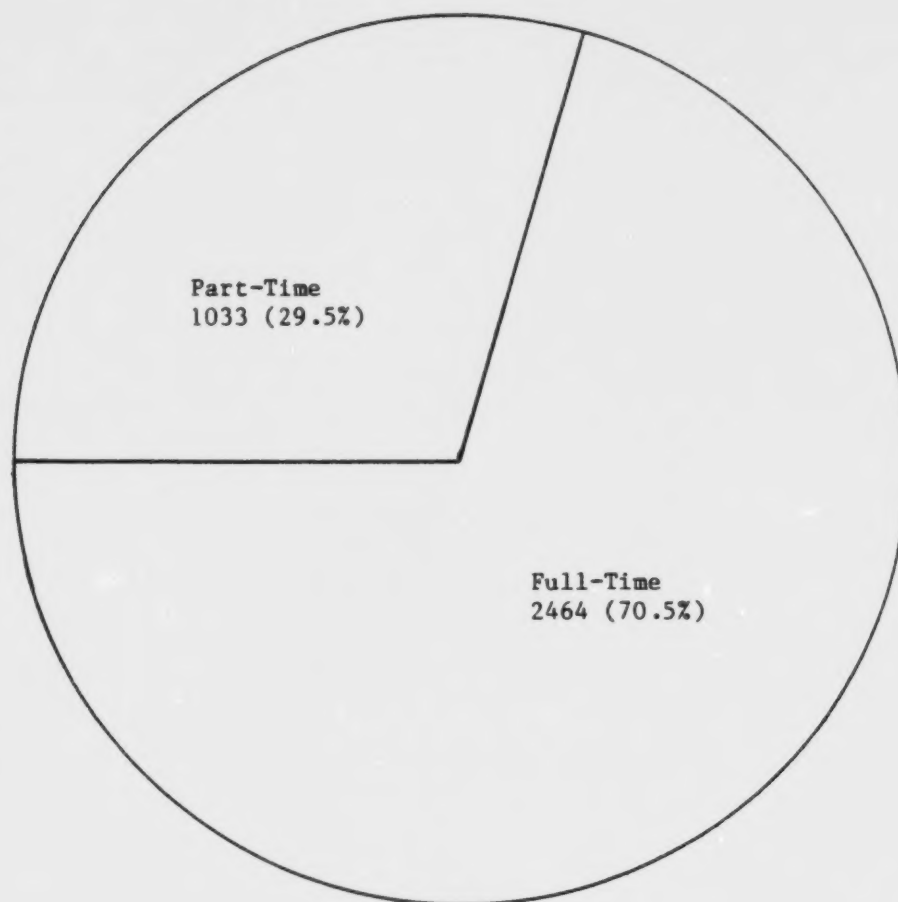


Figure 10. Freshman Composition Enrollments by Instructor Status

received higher grades than their counterparts who enrolled in freshman composition classes taught by full-time instructors (84% versus 81%, and 2.58 versus 2.53). However, standardization of grade assignments rendered these differences insignificant. These differences were apparently caused by the fact that part-time freshman composition instructors assigned consistently higher grades and consistently retained students at a higher rate than their full-time colleagues.

Thirty-seven different instructors taught developmental writing to 880 of the students in this study. No one of them taught more than 12.9% of the student enrollments. Most of the students (64.1%) had male developmental writing teachers (see Figure 11, page 83). Most of them (62.7%) took their developmental writing class from full-time instructors (see Figure 12, page 84). Both part-time and full-time developmental writing instructors drew nearly equal numbers of male and female students.

Over the five-year period of this study, utilization of part-time instructors in writing classes has increased substantially (see Figures 13 and 14 on pages 85 and 86). By 1983, part-timers taught 35.6% of the freshman composition students and 45.4% of developmental writing students who later took freshman composition. The likely reasons for this increased utilization of part-time instructors in writing classes at Butte College are the increased enrollment in developmental writing after instituting the assessment and placement

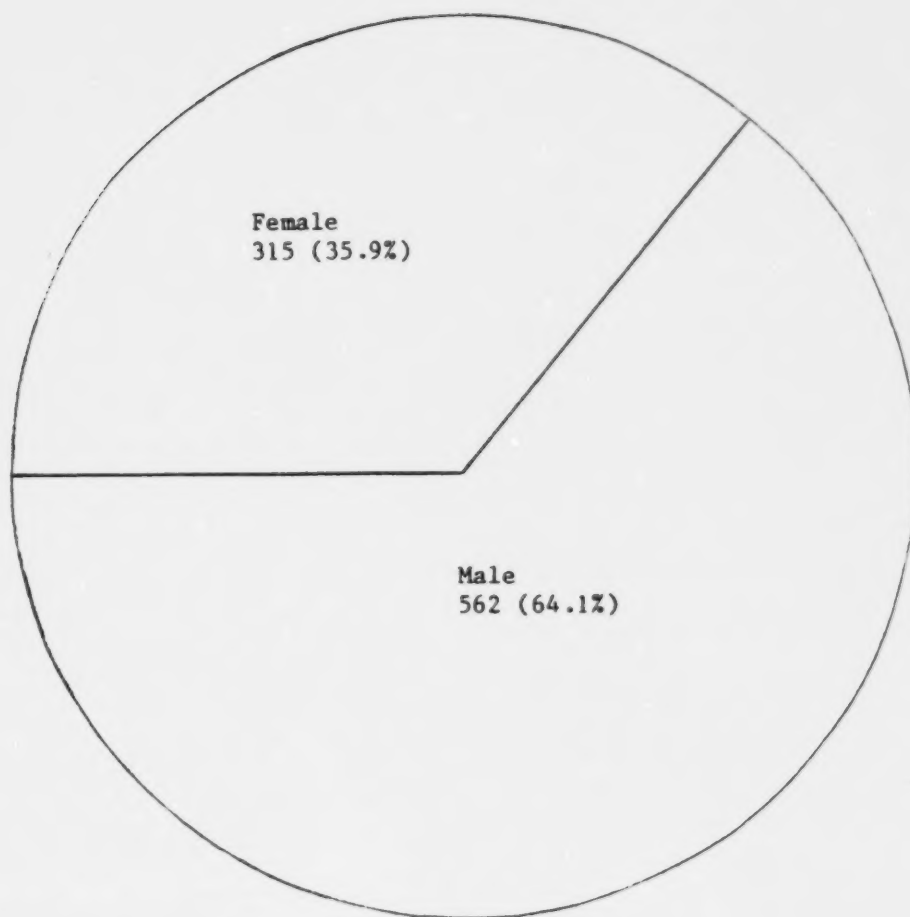


Figure 11. Freshman Composition Enrollments by Gender of Previous Developmental Writing Course Instructor

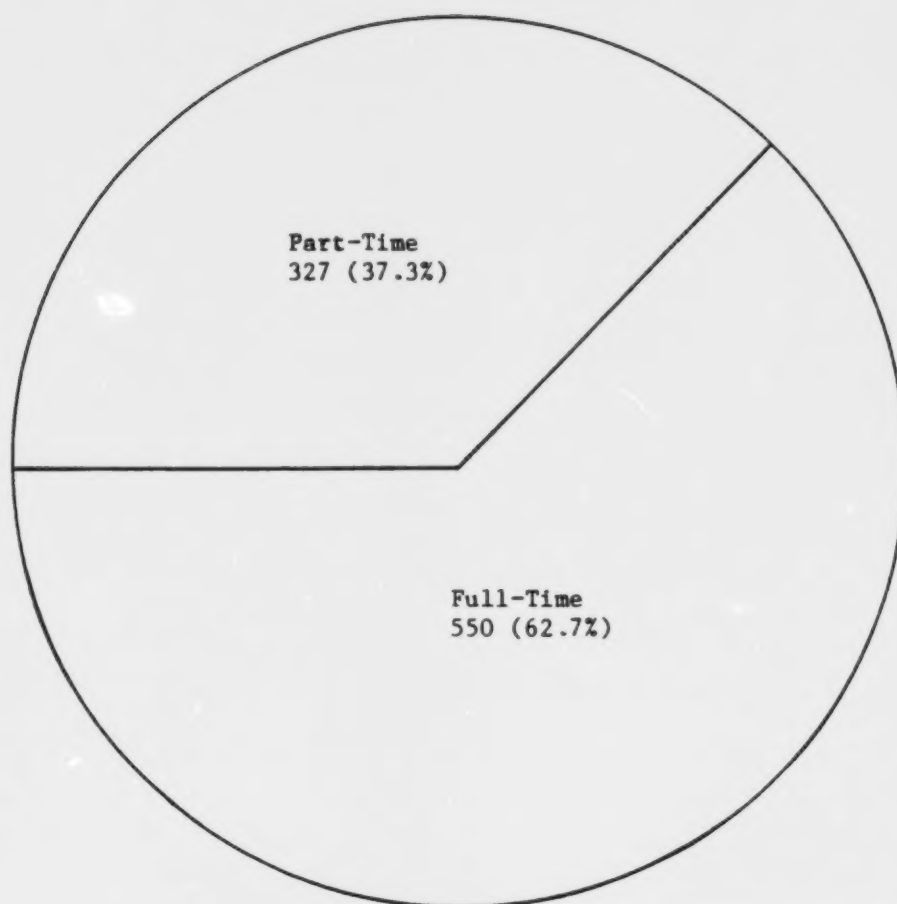


Figure 12. Freshman Composition Enrollments by Status of Previous Developmental Writing Course Instructor

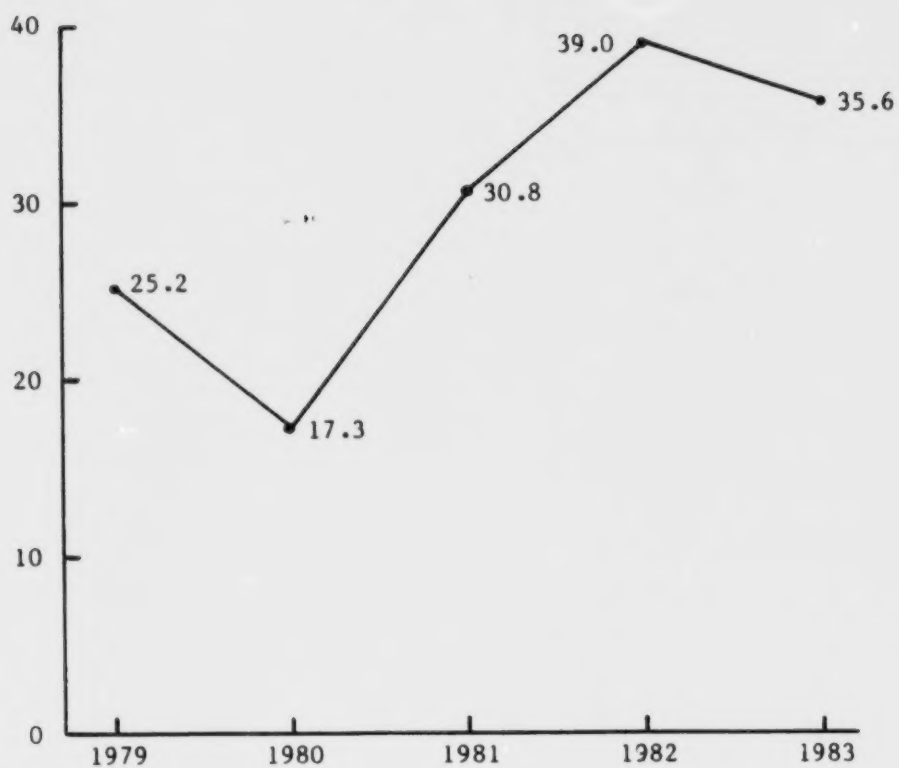


Figure 13. Percent of Freshman Composition Enrollments in Classes Taught by Part-Time Faculty by Year

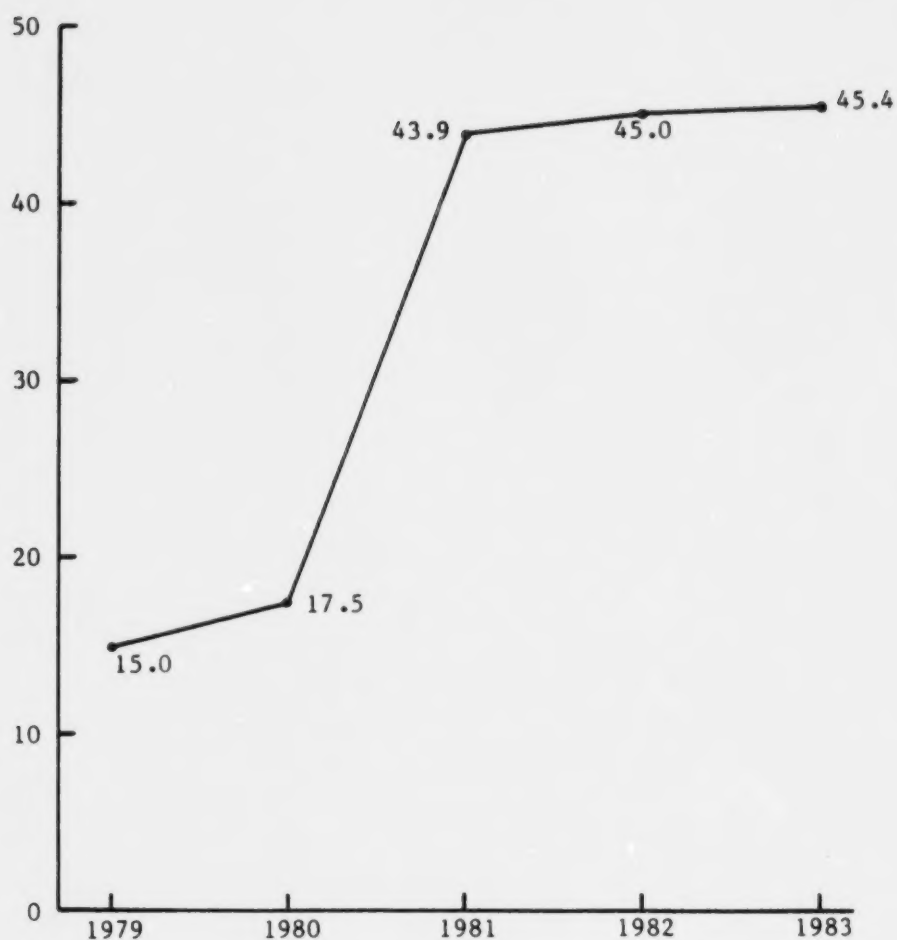


Figure 14. Percent of Freshman Composition Enrollments Who Took a Previous Developmental Writing Class from Part-Time Faculty

program in 1981 and the fact that the financial uncertainty in California since the passage of Proposition 13 in 1978 has prevented the college from replacing full-time English instructors who left the district.

Primary Data File Independent Variable

Description. Since the purpose of this study is to measure the comparative effectiveness of part- and full-time developmental writing instructors, a closer look at these groups is in order. In general, full-time developmental writing instructors in this study were more likely to be male, and they were more likely to teach day (before 5:00 PM) and on campus. Most of the day developmental writing students (69.4%) were enrolled in classes taught by full-time instructors, whereas nearly all of the evening developmental writing students (96.6%) were enrolled in classes taught by part-time instructors. While full-timers taught 70.1% of the on-campus developmental writing students, part-timers taught all of the off-campus classes.

Part-time instructors taught 49.3% of the part-time developmental writing students, while full-time instructors taught 66.8% of the full-time developmental writing students. These data are easily explained by the fact that part-time instructors taught primarily off-campus and evening classes in which part-time students were more heavily represented. The odds were 1.78/1 that a night

student was part-time. Over half (55.4%) of the off-campus developmental writing students were part-time, while only 21.7% of the on-campus students were classified as part-time.

Part-time developmental writing instructors taught lower enrollment classes than did full-time instructors (22.58 versus 25.78). While Cohen (1977, p. 3) noticed this same phenomenon, he did not point out that it is likely due to the fact that part-timers generally teach in the evening and at off-campus locations where enrollment is generally lighter. In this study, evening classes averaged 15.5 students, while day classes averaged 25.6. Off-campus class size averaged 17.4 compared to 25.4 for on-campus classes.

Part- and full-time developmental writing instructors enrolled students with roughly equivalent measures of previous English language ability (high school grade point averages--2.68 versus 2.70; SAT verbal scores--369 versus 363; Nelson-Denny Reading assessment scores--47.5 versus 46.5, Stanford Task English assessment scores--50.9 versus 52.1; Stanford Task Reading assessment scores--56.6 versus 59.0). Only in ACT English scores did they differ significantly. Students who enrolled in developmental writing classes taught by part-time instructors had scored an average of 16.00, while those who enrolled in classes taught by full-timers had scored an average of 13.09. Butte College grade point average served as another measure of comparative abilities between students who were taught developmental writing by part- and full-time instructors. Students who took a

previous developmental writing class from part-time and full-time instructors had similar Butte College grade point averages (2.88 compared to 2.87).

Grade assignment and student persistence. As expected, both grade achievement and student persistence in freshman composition varied significantly by the instructors who taught the previous developmental writing class. Mean persistence of their former students ranged from a low of 0% to a high of 100%, with an overall mean of 80.8%. Mean grade achievement of their former students ranged from 1.50 to 4.00, with an overall mean of 2.55. Standardization to correct for individual freshman composition faculty grading patterns rendered insignificant the differences in grade achievement by previous developmental writing instructor. However, the difference in persistence remained significant (range = 0% to 105%). Clearly, some developmental writing instructors were more effective than others by this measure.

There were no significant differences, however, in the grade achievement and persistence to course completion in freshman composition based upon the part- or full-time status of the developmental writing instructor. Students who had part-time developmental writing instructors did slightly better (grades = 2.58 versus 2.53 and persistence = 83% versus 80%). However, these differences are not statistically significant. Standardization of grade assignments in freshman composition to correct for individual

freshman composition instructor grading patterns did not alter this lack of significance (grades = 2.57 versus 2.56 and persistence = 83% versus 80%). Whatever differences exist in effectiveness of developmental writing instructors were apparently not determined, in general, by the part- or full-time status of the instructor.

However, there was an interesting interaction between the status of the developmental writing instructor and that of the freshman composition instructor. Namely, students who transferred from a developmental writing class taught by a part-time instructor to a freshman composition class taught by a full-time instructor showed higher persistence and grade achievement than those who transferred from a developmental writing class taught by a full-time instructor to a freshman composition class taught by a part-time instructor (85% and 2.55 versus 72% and 2.38). Students who took both classes from full-time instructors showed a mean persistence and grade achievement of 81% and 2.55, while those who took both classes from part-time instructors achieved a mean persistence and achievement of 79% and 2.64. However, these differences were not significant. Standardization of grade assignments, while not affecting the lack of significance in the grade achievement differences, did render the differences in persistence significant ($F = 3.39$, significance = .0176). Students who transferred from a part-time developmental writing instructor to a full-time freshman composition instructor showed the highest standardized persistence in this group

(86.6%). Students who transferred from a full-time developmental writing instructor to a part-time freshman composition instructor showed the lowest standardized persistence in this group (72.7%). Students who took both classes from part-timers persisted to completion in freshman composition at a rate of 75.3%, while 80.9% of those who took both classes from full-timers persisted.

While there were no significant differences in student prior language ability for these four groups of students, the groups did differ in the amount of time they waited between completing a developmental writing class and enrolling in a subsequent freshman composition class. Students who transferred from a full-time developmental writing instructor to a part-time freshman composition instructor waited significantly longer (4.13 terms) before enrolling in freshman composition than did their counterparts who transferred from a part-time developmental writing instructor to a full-time freshman composition instructor (2.08 terms). Students who took both classes from part-time instructors waited an average of 2.24 terms between classes, while those who took both classes from full-time instructors waited an average of 2.69 terms between classes.

This difference in elapsed time between courses is difficult to explain. It would seem that part-time developmental writing instructors were more effective in encouraging their students to enroll in a freshman composition class than were their full-time colleagues. Since this time lapse, as we shall see, is significantly

and adversely correlated with student persistence in freshman composition, it may, at least partially, explain why students who take developmental writing from part-time instructors and freshman composition from full-time instructors persist to course completion in freshman composition at a higher rate than do their colleagues who take developmental writing from full-time teachers and freshman composition from part-time teachers.

A second interesting interaction was detected between the part- or full-time status of the instructor and that of the student, as defined by units completed. Part-time freshman composition students showed significantly less persistence and grade achievement if they had a full-time rather than a part-time instructor (59.7% and 2.07 versus 79.7% and 2.76). Full-time freshman composition students did about as well with either type of instructor (91.4% and 2.86 with a part-time instructor versus 91.7% and 2.72 with a full-time instructor). Standardization of grade assignments to correct for individual grading patterns did not alter this significance. Part-time students still showed poorer persistence and achievement when enrolled in classes taught by full-time instructors (60.9% and 2.11 versus 75.7% and 2.57).

Obviously, full-time instructors do not discriminate against part-time students on the basis of prior identification. Rarely do instructors know much about the course load and out-of-class commitments of their students. It is more likely that full-time

instructors are less tolerant of the pressures and obligations their part-time students have. Part-time instructors, on the other hand, must retain students to retain their jobs and are, therefore, likely to be more understanding of outside influences in the lives of part-time students. Part-time instructors also, as Abel (1976, p. 14) points out, generally have more time to prepare for classes than full-timers can possibly afford. This lack of time on the part of full-time instructors may lead to less flexibility when dealing with students who have unique out-of-class commitments. Further evidence for this assertion is provided by the fact that the largest percentage (42.4%) of students who repeated freshman composition were part-time students who took their first class from full-time teachers.

This explanation is consistent with the assertion of Overall and Cooper (1981, pp. 3-5) that part-time faculty might be more effective in teaching the less-prepared part-time students who are employed during their college careers, while full-time faculty might be more effective teaching more highly prepared full-time students who have no competing obligations.

For those who would argue that part-timers are merely lowering standards and expectations to retain students, it should be recalled that these differences persist even after standardization to correct for individual differences in faculty grading patterns. Moreover, it is interesting to note that this interaction effect persisted from the developmental writing course to the freshman composition course. That

is, part-time students who took developmental writing classes from part-time instructors showed higher persistence and grade achievement in a subsequent freshman composition class than did part-time students who took the developmental writing class from full-time teachers (82.6% and 2.54 versus 69.6% and 2.49). Full-time students did about as well in freshman composition with either type of instructor (83.0% and 2.60 with part-time instructors versus 82.2% and 2.54 with full-time instructors). While the grade achievement differences are not statistically significant, the persistence differences are ($F = 3.52$, significance = .015). Standardization of grade assignments, however, did alter the significance of this finding. Part-time students with part-time developmental writing instructors showed higher, but not significantly higher, standardized persistence in a subsequent freshman composition class (79.3%) than did part-time students with full-time developmental writing instructors (69.6%) ($F = 2.85$, significance = .089).

Primary Data File Control Parameters

Several control variables were identified in Chapter I (see Table 2, page 12) as possibly affecting measures of the dependent variables. The major reason for collecting and analyzing these control variables was to detect any differences in the populations of students taught by full- and part-time developmental writing instructors. However, it was also important to determine whether

these factors affected student persistence and achievement, and, if so, what the relative importance of these factors was.

Student gender distribution. Students were nearly equally divided by gender in both developmental writing (see Figure 15, page 96) and freshman composition (see Figure 4, page 70). Moreover, they were fairly equally divided by gender into classes taught by full- and part-time instructors. Male freshman composition students comprised 51.0% of the part-time instructors' classes and 48.8% of the full-time instructors' classes, whereas female students made up 49.0% of the part-time freshman composition instructors' classes and 51.2% of the full-time instructors' classes. Male developmental writing students comprised 49.5% of the part-time instructors' classes and 53.3% of the full-time instructors' classes, whereas female students made up 50.5% of the part-time developmental writing instructors' classes and 46.7% of the full-time instructors' classes. However, students who took developmental writing from a full-time instructor and then transferred to a part-time freshman composition instructor were predominantly males (65.1%). This may be due to the fact that male students in the sample were more likely than females to transfer from a day developmental writing class into an evening freshman composition class.

Although there was no significant difference in persistence to course completion in freshman composition by student gender (81% of the males persisted compared to 83% of the females), female students

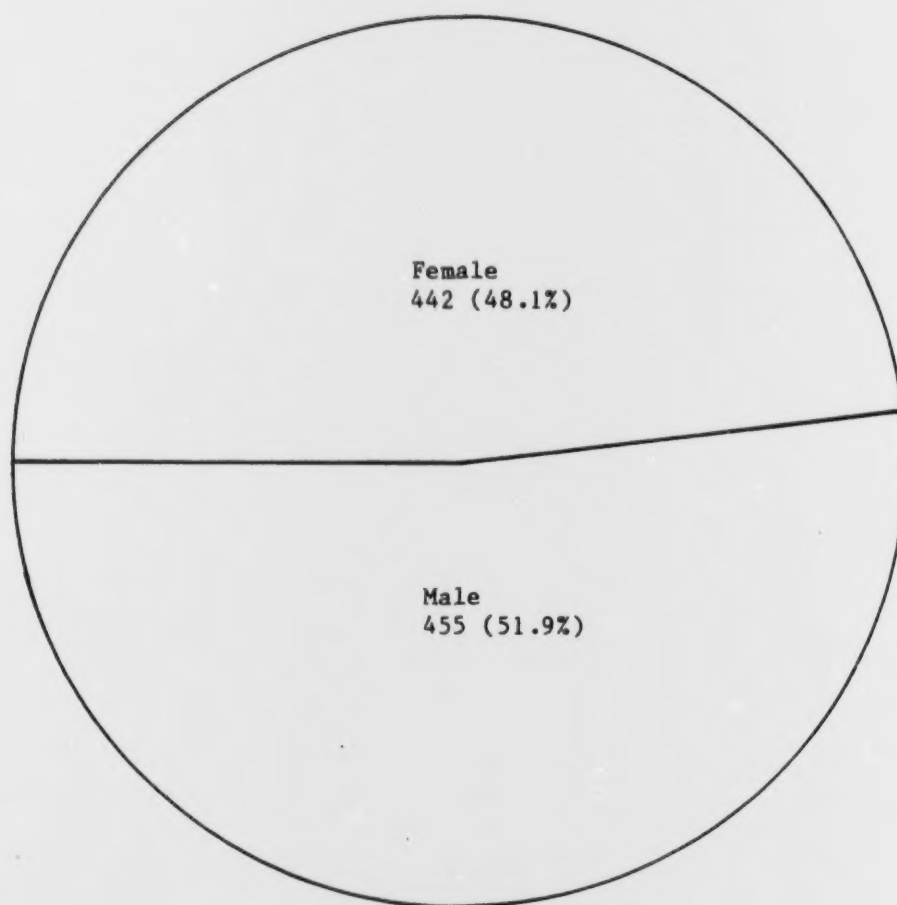


Figure 15. Gender Distribution of Students in Previous Developmental Writing Classes

did achieve significantly higher grades in freshman composition than did their male counterparts. Female students received an average grade of 2.78 on a 4.00 scale compared to 2.49 for male students. Standardization of grade assignments to correct for individual instructor grading patterns did not alter this relationship. On this standardized scale, male and female students still persisted at about the same rate (81% and 83%). Female students received average grades of 2.77 compared to 2.49 for male students.

Student status. On the average, students in the study completed 11.2 quarter units while enrolled in freshman composition. Based upon units completed, 58.5% of the students were classified as full-time while taking freshman composition (see Figure 5, page 72). Those who completed a previous developmental writing class completed an average of 13.1 quarter units while enrolled in developmental writing. Nearly 75% of these students were classified full-time while taking developmental writing (see Figure 16, page 98).

Students who were classified full-time, based upon units completed, persisted at a significantly higher rate and achieved significantly higher grades in freshman composition than did those students who were part-time. The persistence for part-time students was 68% compared to 92% for full-time students. Full-time students received a mean grade in freshman composition of 2.75 versus 2.42 for part-time students. Standardization of grade assignments to correct for individual faculty grading patterns made these differences even

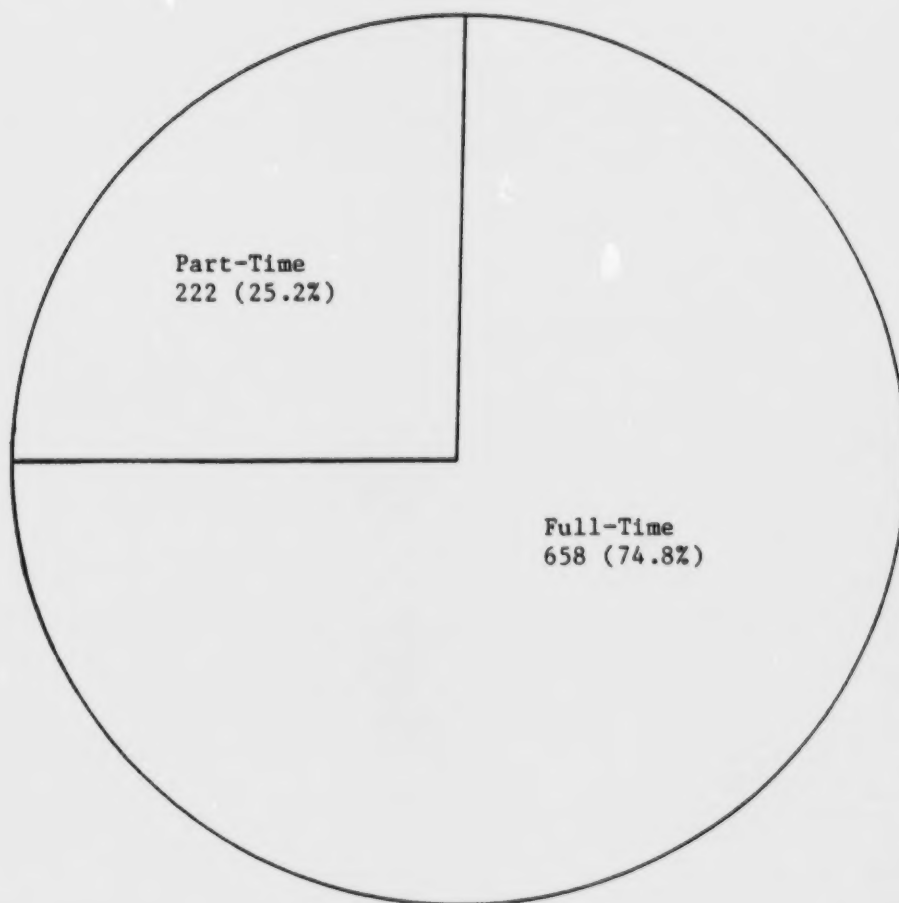


Figure 16. Freshman Composition Enrollments by Student Status While Enrolled in a Previous Developmental Writing Class

more significant (67% and 2.35 for part-time students versus 92% and 2.79 for full-time students).

Student status while taking developmental writing, however, had less of an effect upon persistence and achievement in a subsequent freshman composition class. In fact, grade achievement in freshman composition was not significantly affected by student status while enrolled in developmental writing. However, developmental writing students who were full-time showed a significantly higher persistence in a subsequent freshman composition class (83% versus 76%). Standardization made this difference even more significant (83% versus 75%).

Quarter of enrollment. Fall and Winter were the most popular quarters for students to enroll in both freshman composition and a previous developmental writing class (see Figures 17 and 18 on pages 100 and 101). Although student persistence was not significantly affected by the quarter in which the student took freshman composition, grade achievement did vary by quarter. The best grades were received in Summer classes (2.75 on a 4.00 scale), while the worst grades were received in Spring quarter (2.58). Standardization of grade assignments did affect this ranking. After standardization to correct for individual faculty grading patterns, the best grades were received in Fall (2.72), while the worst grades were received in Winter (2.56). Spring and Summer standardized grades were 2.62 and 2.69, respectively. Persistence remained unaffected by quarter.

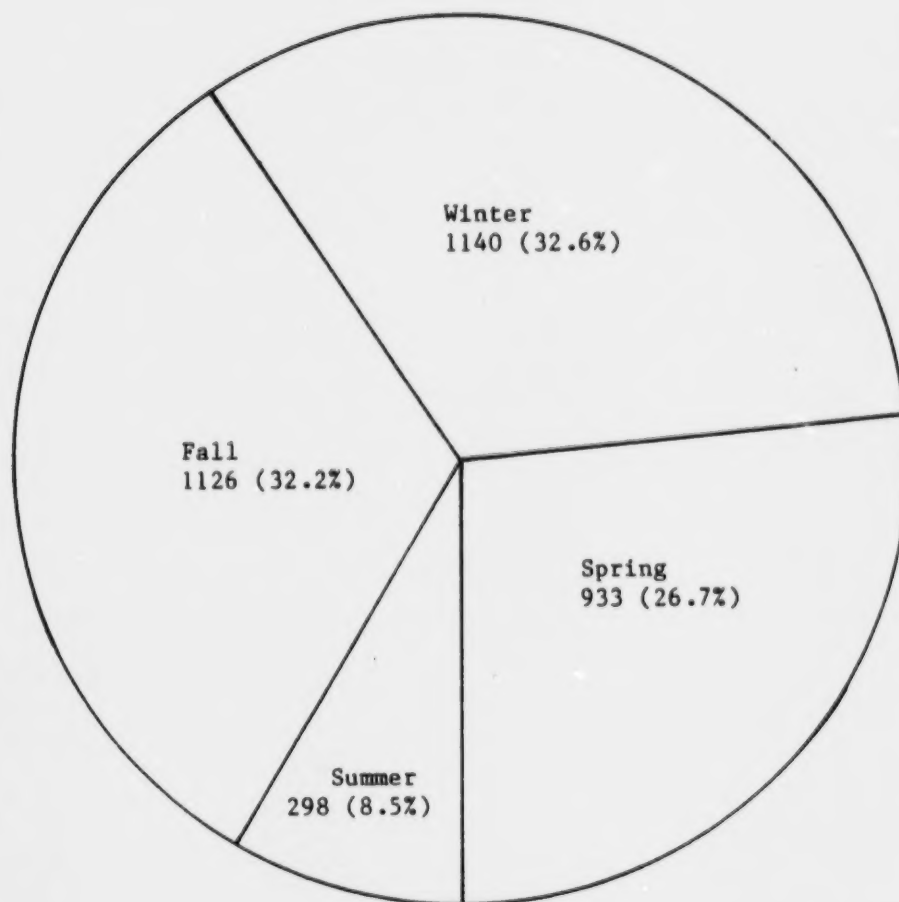


Figure 17. Freshman Composition Enrollments by Quarter

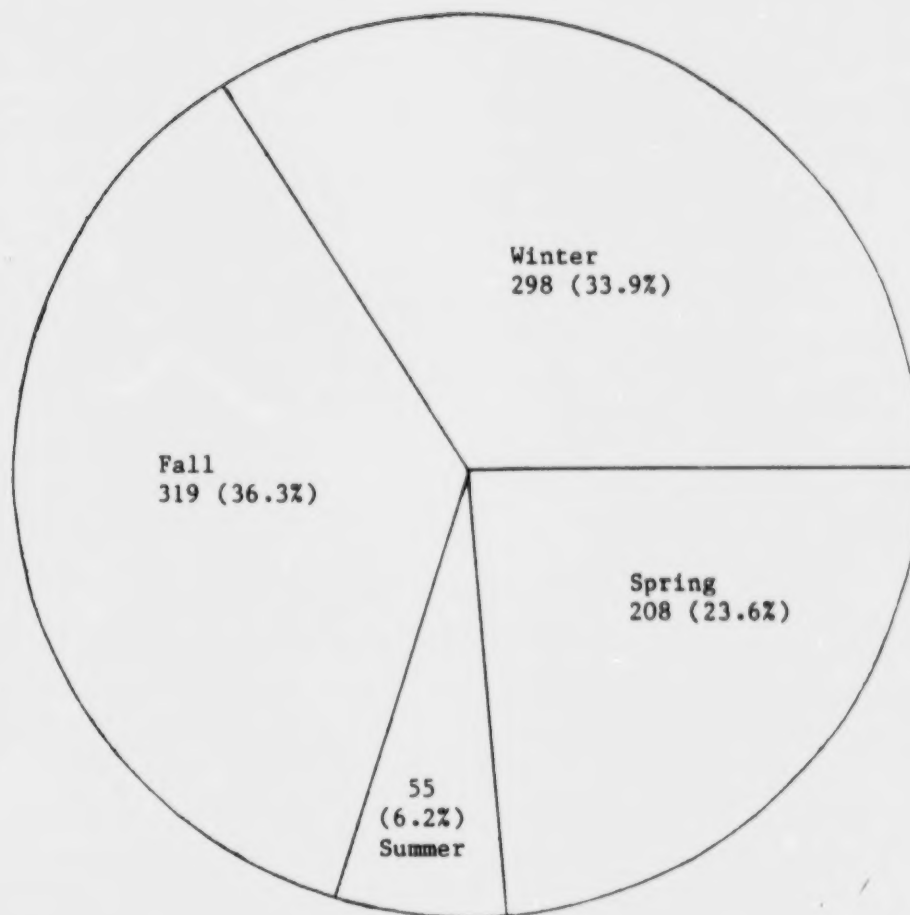


Figure 18. Freshman Composition Enrollments by the Quarter that a Previous Developmental Writing Class Was Completed

This difference in grade achievement by quarter is difficult to explain. One possible explanation is the uneven instructional time assigned to each quarter. Fall quarter is often nearly two weeks longer than the other two quarters. Although Summer Session is the shortest term (6-8 weeks), students generally reduce course load proportionately. Another explanation is provided by the fact that the students who wait until Winter or Spring quarters to enroll in writing classes are weaker students who would be expected to achieve at a lower rate than their counterparts who do not delay enrolling in a writing class.

In support of this argument, student ability as measured by high school grade point average was highest for students who enrolled in freshman composition in the Fall (2.841) and consistently declined as the academic year progressed (2.762 in Winter, 2.758 in Spring, and 2.654 in Summer). Students who enrolled in freshman composition in the Fall also had the highest Nelson-Denny scores (61.9 compared to 52.1 in Winter, 56.5 in Spring, and 55.5 in Summer). Fall quarter freshman composition students also scored higher on the Stanford Task English and Reading tests (59.3 and 63.6 compared to 56.5 and 61.2 in Winter, 57.2 and 62.1 in Spring, and 55.3 and 59.1 in Summer).

Although student grade achievement in freshman composition was not significantly affected by the quarter in which a developmental writing class was taken, persistence to course completion in freshman composition did significantly vary by the quarter the student took a

previous developmental writing class. The highest persistence (86.9%) occurred with students who completed developmental writing classes in the Winter quarter, while the lowest persistence (73.6%) was achieved by those students who took the developmental class in the Spring quarter. After standardization of persistence rates to correct for individual instructor grading patterns, the Spring quarter persistence rate (75.4%) remained significantly lower than that of the other quarters (80% for Fall, 85% for Winter, and 86% for Summer). However, there were no significant differences in previous English language ability by the quarter the student enrolled in the previous developmental writing class.

A possible explanation for the lower persistence rates exhibited by the students who took developmental writing classes in the Spring and Fall quarters is provided by examining the time lapse between completion of a developmental writing class and enrolling in a subsequent freshman composition class. Students who took developmental writing classes in the Fall and Spring quarters waited significantly longer (3.35 and 3.26 terms) to take the subsequent freshman composition class than did those students who took the developmental writing class in the Winter and Summer (1.91 and 1.95 terms). As we shall soon see, this time delay did significantly and adversely affect persistence in freshman composition.

Staffing patterns also differed significantly by quarter. Part-time developmental writing instructors were more heavily utilized

in the Spring and Summer terms when they taught 46.9% and 69.1% of students who later enrolled in freshman composition. By contrast, part-timers taught only 32.1% and 30.3% of those students in the Fall and Winter quarters. In the freshman composition classes, part-time instructors were more heavily utilized in the Winter and Summer terms, when they taught 33.2% and 58.7% of the students. In the Fall and Spring quarters, they taught 26.5% and 19.5% of the freshman composition student enrollments.

Year of enrollment. With the exception of 1981, enrollments in freshman composition have remained relatively stable over the five-year period of the study (see Figure 19, page 105). The enrollment decrease in 1981 might be at least partially explained by the fact that, in January of 1981, Butte College began a program of assessing basic literacy skills abilities for all students who wanted to register for freshman composition. Assessment instruments included the Nelson-Denny Reading test and a writing sample. Scores were used to place students into appropriate levels of writing classes. Some students who might otherwise have registered for freshman composition, then, may have been directed into a developmental writing class. In fact, enrollments in developmental writing did increase dramatically in 1981 (see Figure 20, page 106). This effect appears to have been temporary, however. Enrollments in freshman composition recovered in 1982 and 1983. Developmental writing enrollments remained high.

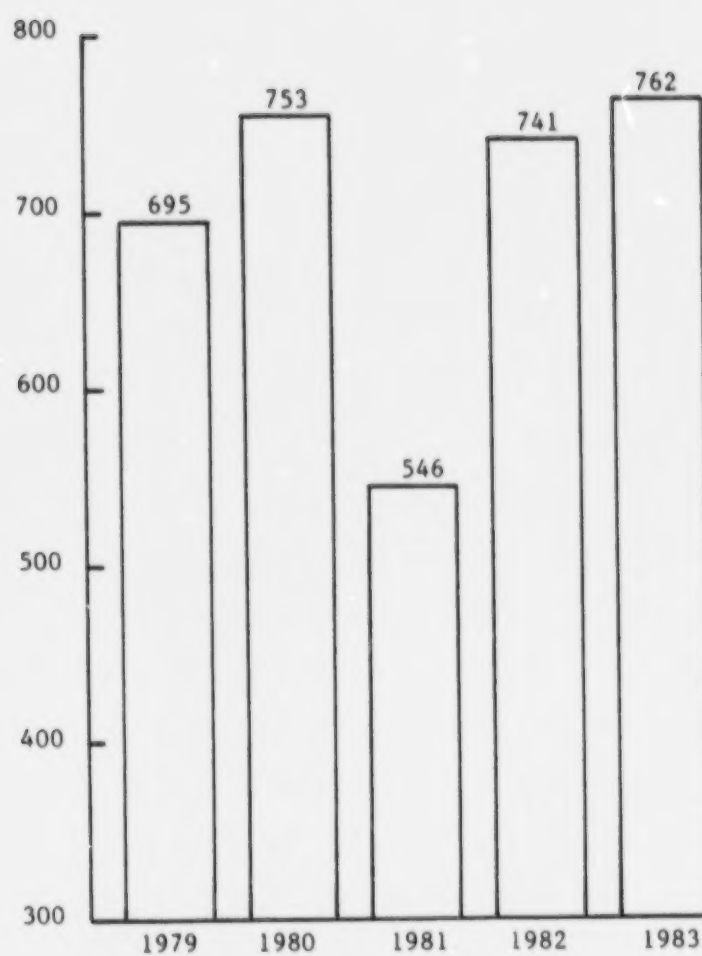


Figure 19. Freshman Composition Enrollments by Year

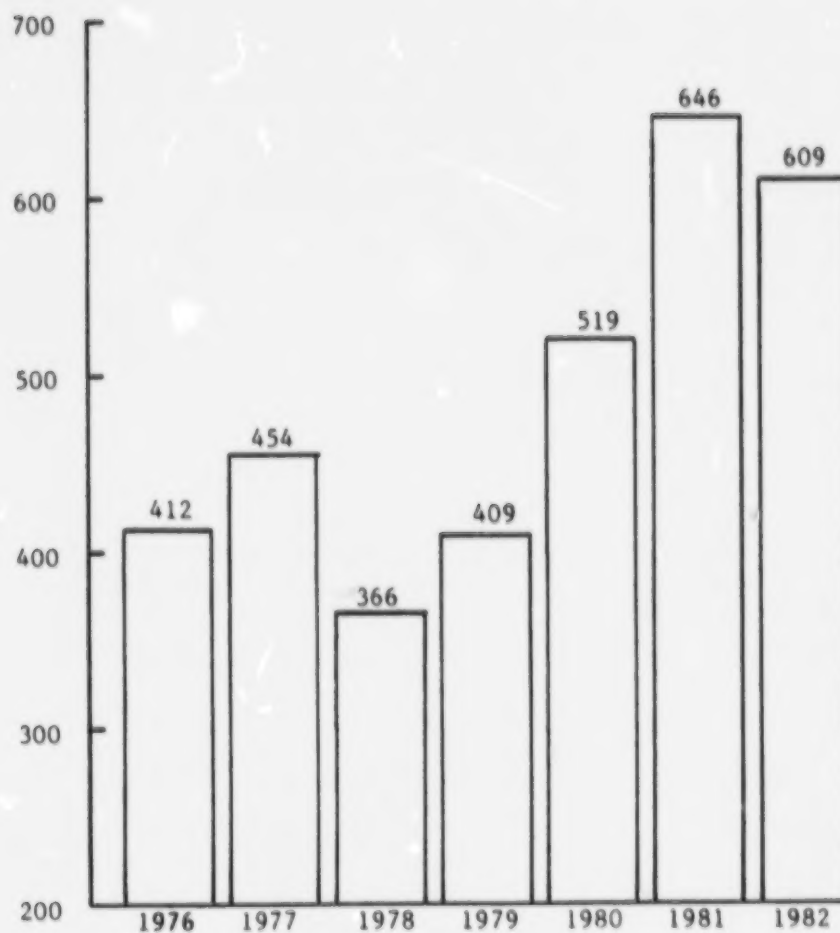


Figure 20. Developmental Writing Enrollments by Year

By Summer of 1982, the assessment program was expanded to include all students who wanted to register for any English or Reading class. The assessment instruments were changed to the Stanford Task Tests of English and Reading Abilities. Effective with the start of the Fall quarter, 1983, all new students who wanted to register for nine units or more, as well as those who wanted to register for any English or Reading class, were given the assessment tests. Students are now placed into various levels of English classes based upon these scores. Further, counselors use assessment data to guide students into courses which are commensurate with student abilities.

Although student persistence in freshman composition was not significantly affected by these changes, persistence did increase during 1981 (see Figure 21, page 108). Standardization made these changes in student persistence even more dramatic, although they remained insignificant. Student grade achievement in freshman composition, however, did change significantly over the five-year period of the study, with the most dramatic increase occurring in 1981 (see Figure 22, page 109). These changes remained significant even after standardization of grade assignments. Presumably, the institution of a basic skills assessment and placement program at Butte College has positively impacted grade achievement in freshman composition.

However, there is another explanation for the increase in grade achievement of students which has occurred since 1981. As noted

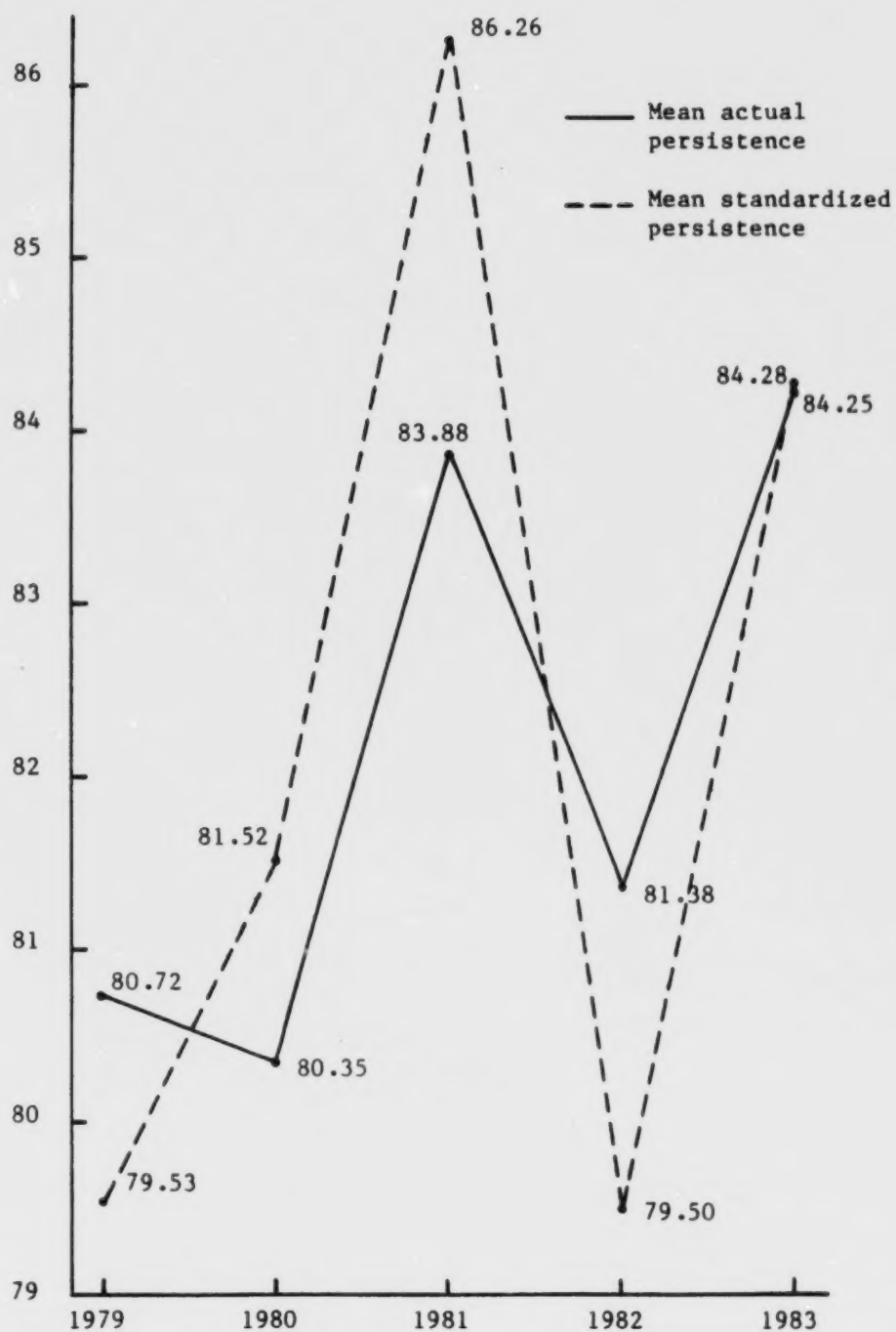


Figure 21. Mean Persistence Percentages in Freshman Composition by Year

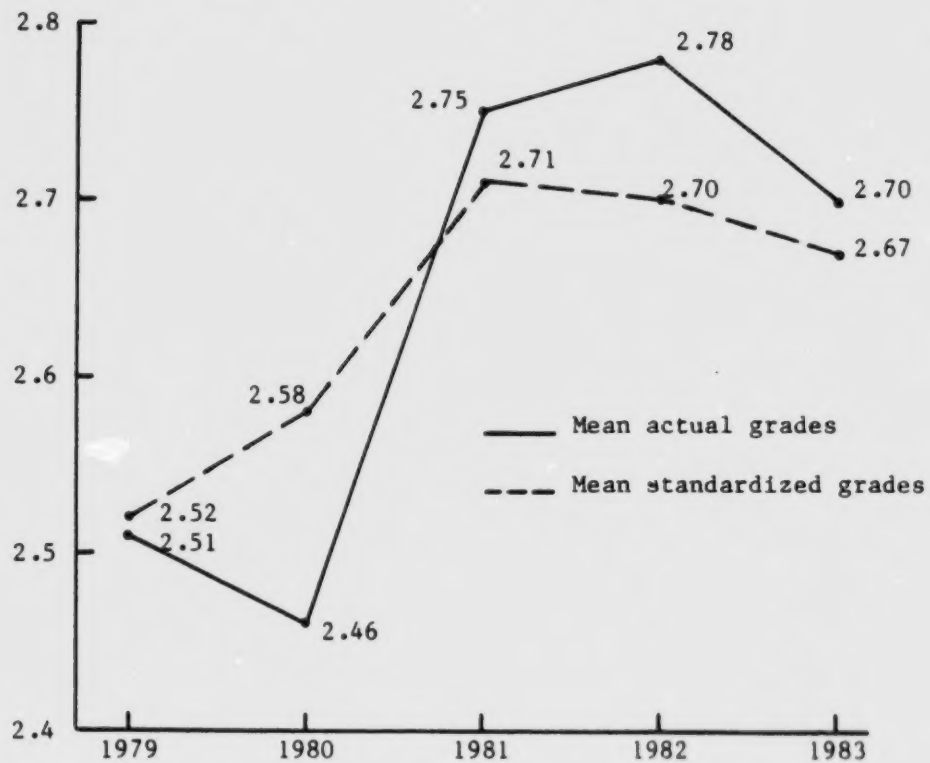


Figure 22. Mean Grades in Freshman Composition by Year

earlier, utilization of part-time instructors in writing classes increased significantly during the period covered by the study, with the greatest increase occurring in 1981 (see Figures 13 and 14 on pages 85 and 86). In fact, these graphs nearly parallel the graph which illustrates increased grade achievement (see Figure 22, page 109). Much of the increase in freshman composition grade achievement since 1981 may, then, be explained by the fact that part-time writing instructors are teaching more of the classes; as indicated earlier, part-time instructors assign higher grades.

Time lapse between courses. Although conventional wisdom would hold that students who enrolled in freshman composition classes soon after completing a developmental writing class would persist and achieve at a higher rate in freshman composition than those who wait longer, no significant differences in achievement were discovered. Persistence, however, was adversely affected by a delay in enrolling in a subsequent freshman composition class ($R = -0.125$, $F = 4.40$, significance $<.0001$). Standardization of grade assignments does not affect these findings. Grade achievement remains unaffected by time lapse between the courses, whereas persistence is still negatively affected ($R = -0.113$, $F = 4.16$, significance $<.0001$).

It is interesting to note that students who take developmental writing classes from part-time instructors do not wait as long to enroll in the subsequent freshman composition class (2.14 terms) as do those students who take developmental writing from full-time

instructors (2.90 terms). Moreover, students who transfer from a developmental writing class taught by a part-time instructor to a freshman composition class taught by a full-time instructor had significantly fewer terms (2.08) between the classes than did their counterparts who took developmental writing from a full-time instructor and freshman composition from a part-time instructor (4.13). Students who took both classes from part-timers waited an average of 2.24 terms between the classes, while those who stayed with full-timers waited an average of 2.69 terms. It would appear that part-time developmental writing instructors are more effective in encouraging their students to enroll in freshman composition sooner.

Time of day. Student enrollments in both classes were generally higher at the prime class times of 8:00 AM, 9:00 AM, 10:00 AM, 11:00 AM, 12:00 PM, 1:00 PM, 6:00 PM, and 8:00 PM, with the majority of students attending classes before 5:00 PM (see Figures 23 and 24 on pages 112 and 113). Although persistence in freshman composition was unaffected by the time of day the class was taken, grade achievement did depend upon time of day. Students enrolled in evening (after 5:00 PM) freshman composition classes received higher grades (2.73) than those who enrolled in day classes (2.61). Standardization of grade assignments to correct for individual faculty grading patterns, however, rendered this difference insignificant. Apparently, the difference was more teacher-dependent than time-

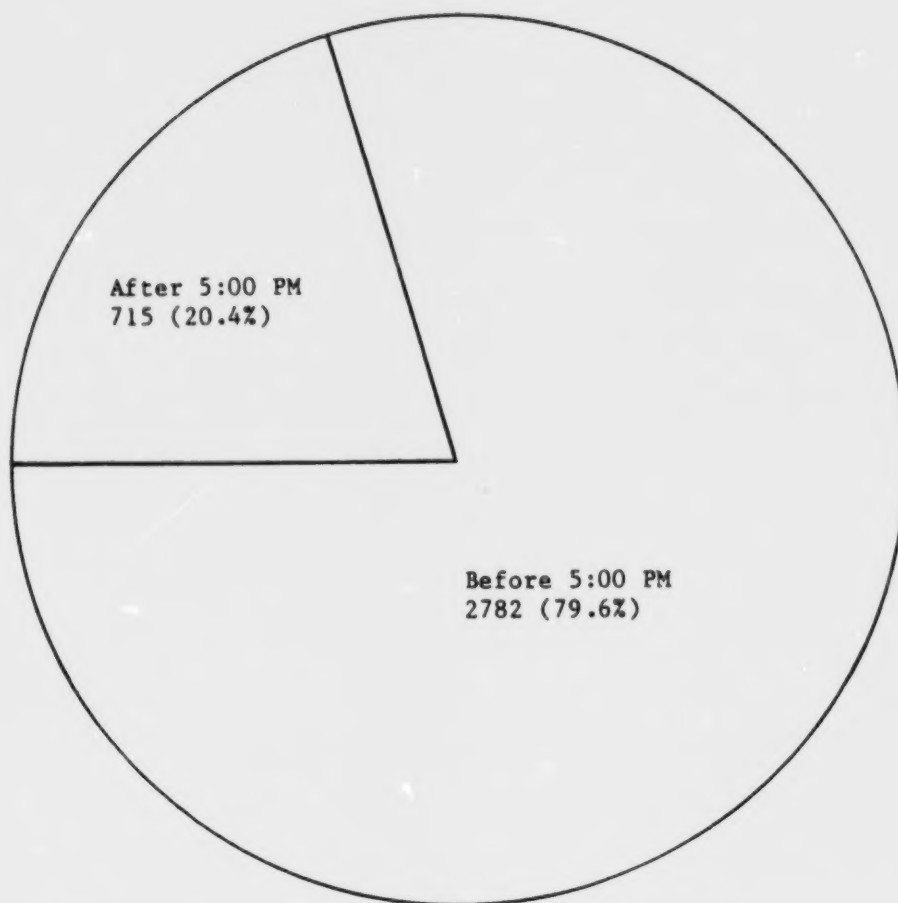


Figure 23. Freshman Composition Enrollments by Time of Day Students Enrolled in Class

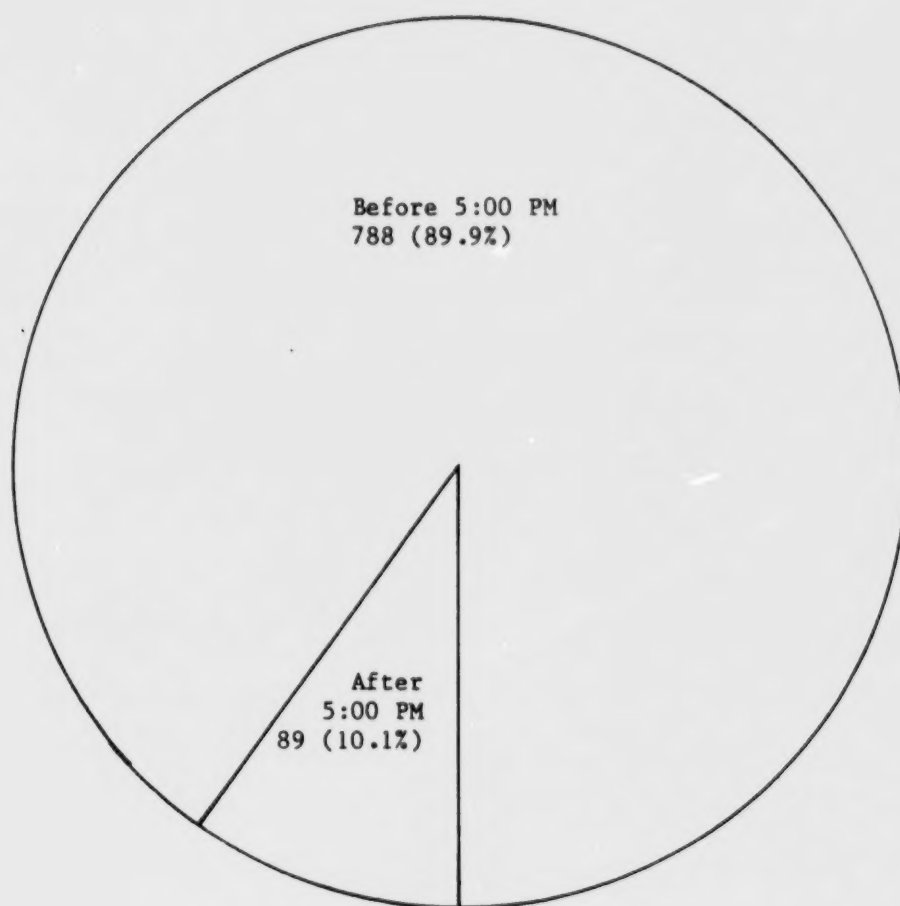


Figure 24. Freshman Composition Enrollments by Time of Day Students Enrolled in a Previous Developmental Writing Class

dependent. Evening freshman composition instructors assigned consistently higher grades than their day counterparts.

Students who enrolled in evening (after 5:00 PM) developmental writing classes showed persistence and grade achievement in a subsequent freshman composition class nearly identical to those of their counterparts who were enrolled in day classes (2.56 and 78.7% versus 2.55 and 81.1%). Standardization of grade assignments does not alter this lack of significant differences in persistence and grade achievement (2.53 and 80.6% versus 2.57 and 80.8%). Most (96.6%) of these evening developmental writing students had part-time instructors, whereas 69.4% of the day students had full-time instructors.

Meetings per week. The classes were scheduled to meet, for the most part, twice, three times, or four times per week for the duration of the instructional term. For freshman composition, four meetings per week were most popular (see Figure 25, page 115), while for developmental writing three meetings per week were favored (see Figure 26, page 116).

Students who enrolled in freshman composition classes which met three times per week persisted and achieved at a rate which was significantly better than their counterparts who met twice or four times per week. The mean persistence in the classes which met three times per week was 88.12% compared to 80.38% in the classes which met twice per week and 81.59% in the classes which met four times per

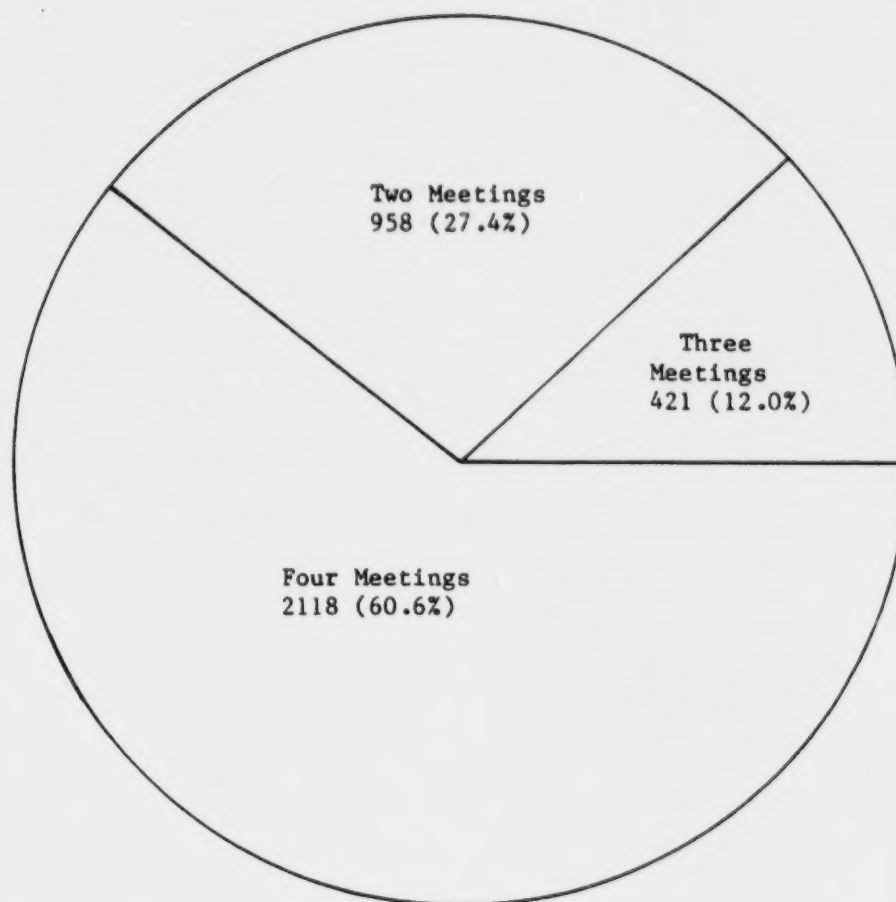


Figure 25. Freshman Composition Enrollments
by Class Meetings per Week

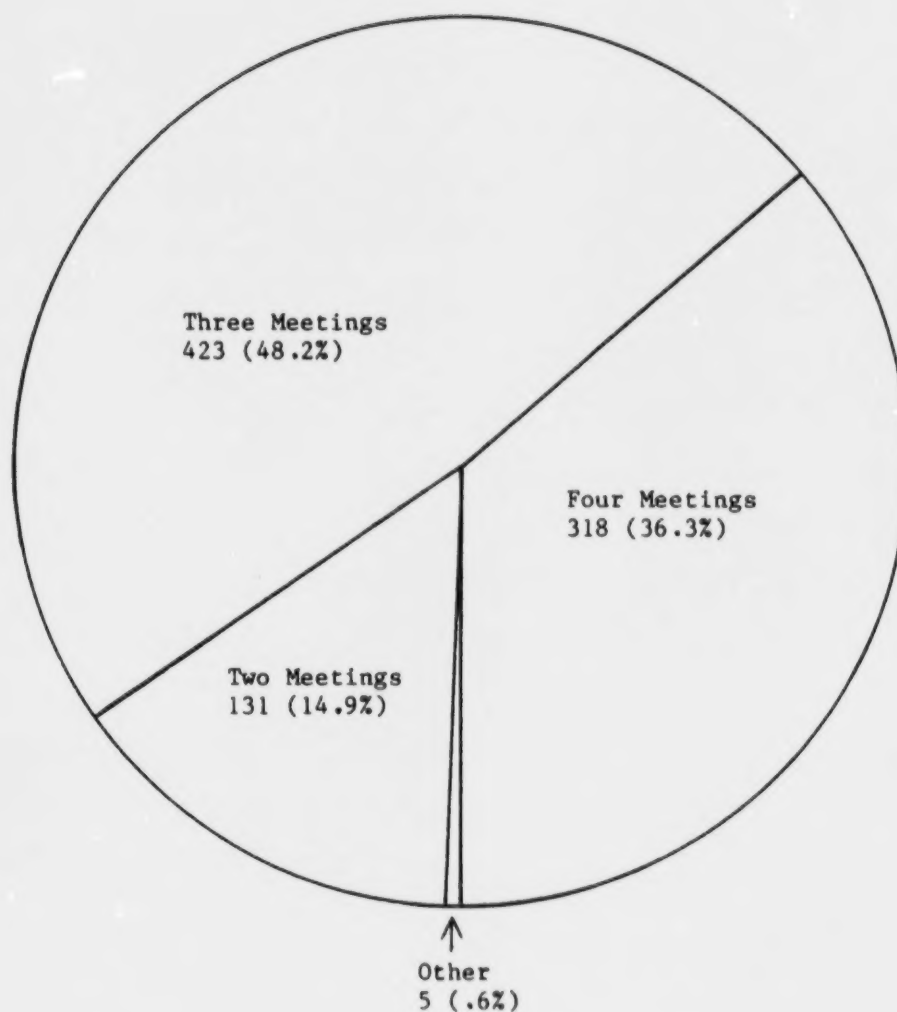


Figure 26. Freshman Composition Enrollments by the Number of Meetings per Week for the Previous Developmental Writing Class

week. The mean grade received in the classes which met three times per week was 2.87 versus 2.68 for the classes which met twice per week and 2.56 for the classes which met four times per week. These differences are rendered insignificant, however, when persistence and grade assignments were standardized to correct for individual faculty grading patterns. Presumably, faculty members who were assigned to teach the classes which met three times per week consistently assigned higher grades and consistently retained more students. Many of the classes which met three times per week were scheduled in area high schools for advanced senior high school students and often were taught by high school instructors. Perhaps this might explain this positive bias.

Students who were enrolled in previous developmental writing classes which met four times per week persisted in freshman composition classes at a significantly higher rate than their counterparts in classes which met twice or three times per week. The mean persistence of the students who came from developmental writing classes which met four times per week was 84.59% compared to 79.43% for those who came from classes which met three times per week and 77.86% for those who came from classes which met twice per week. Standardization did not change this relative ranking, nor did it change the significance of the difference.

On the other hand, mean student grade achievement in freshman composition was not significantly affected by the number of meetings

per week of the previous developmental writing class. Standardization of grade assignments did not affect this lack of significant effect. Developmental writing classes which met four times per week appeared to have been more effective in terms of student persistence, although not grade achievement, in a subsequent freshman composition class. Presumably, developmental writing students were better off with more frequent, rather than more concentrated, exposure to instruction.

Part- and full-time developmental writing instructor assignments also varied significantly by class meetings per week. Part-time developmental writing instructors were more highly represented in the classes which met twice per week, while full-timers taught more of the developmental writing classes which met four times per week. Of the students who completed developmental writing classes which met twice per week, 71.8% were taught by part-time faculty. Full-timers taught 65.7% of the students who took classes which met three times per week and 72.3% of the students who met four times per week. In all, part-timers taught 43% of the students in the less effective classes which met twice or three times a week, while full-timers taught 71.8% of the students in the more effective classes which met four times per week.

Class location. Classes at Butte College are taught in several off-campus sites as well as on the main Pentz Road campus. Full-time faculty frequently argue that instructional quality of off-campus classes is questionable because of poor support services

(e. g., library, media, duplication) and because students are not exposed to a college milieu. These same arguments apply to writing classes, even though most of the classes are taught on-campus (see Figures 27 and 28 on pages 120 and 121).

Students who take off-campus freshman composition classes persist at a higher rate and achieve higher grades than their campus-based counterparts. Eighty-seven percent of the off-campus freshman composition students persisted to course completion compared to only 81% of the campus students. The off-campus students received a mean grade of 2.80 in freshman composition compared to 2.59 for their campus counterparts. These differences in persistence and grade achievement, however, were rendered insignificant when these values were standardized to correct for individual faculty grading patterns. The differences, then, were more teacher-dependent than location-dependent. Off-campus freshman composition teachers, nearly all of whom were part-timers, assigned consistently higher grades and consistently retained more students. This may be understandable in light of the fact that continuation of the classes (and thus faculty pay) is dependent upon achieving a minimum enrollment. Future contracts may well depend upon a teacher's ability to maintain a minimum enrollment.

Of more interest, then, is the comparative achievement and persistence of students who took their previous developmental writing class off-campus. Analysis of variance reveals no significant

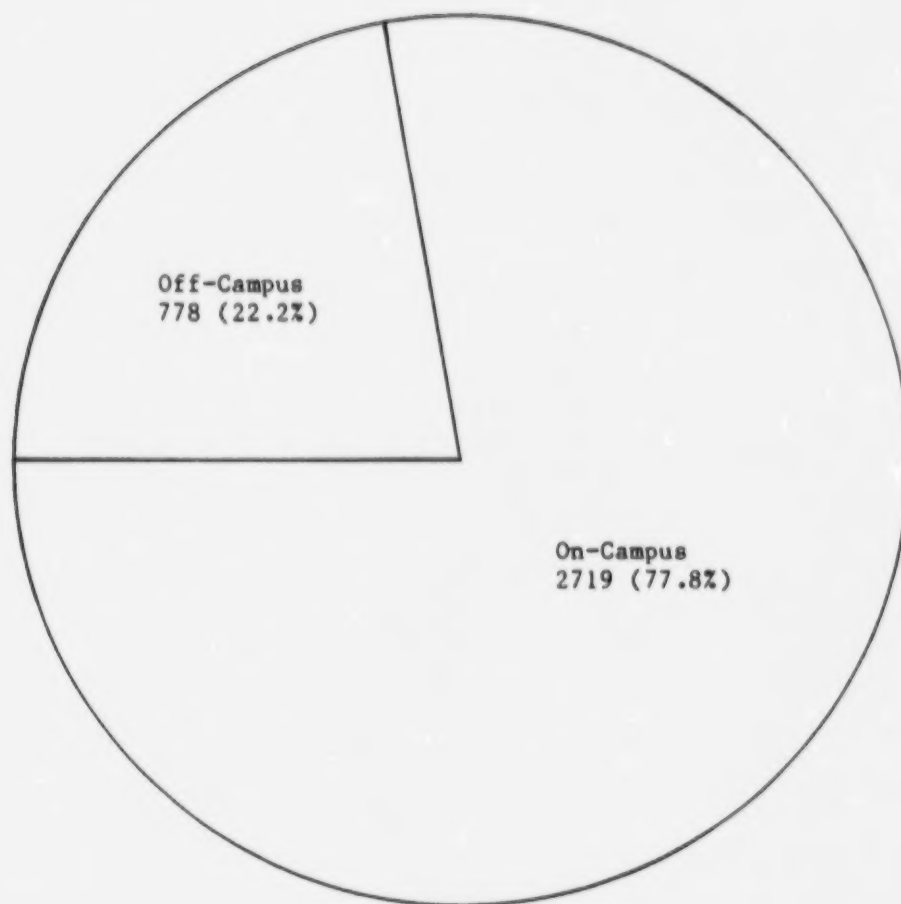


Figure 27. Freshman Composition Enrollments by
On- or Off-Campus Location of Class

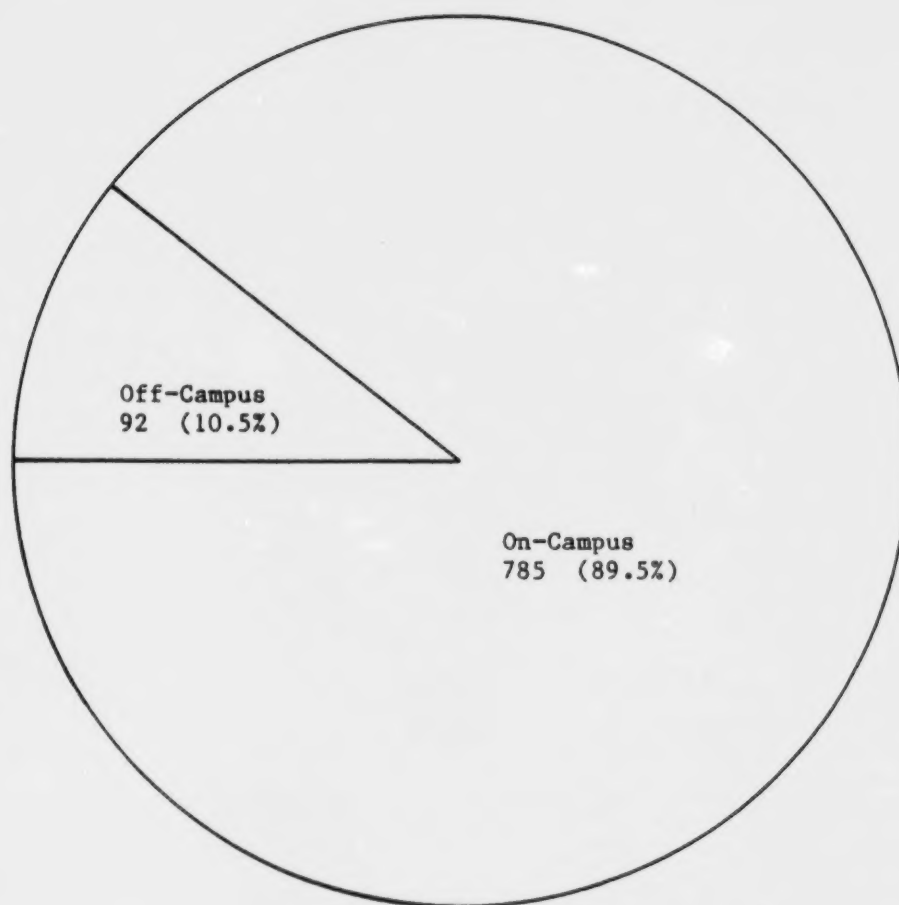


Figure 28. Freshman Composition Enrollments by On- or Off-Campus Location of Previous Developmental Writing Class

difference in either persistence or achievement in freshman composition between students who took their previous developmental writing class on- or off-campus. Standardization of grade assignments did not make either of these differences significant. By these measures, developmental writing classes taught off-campus are as effective as those taught on-campus.

To provide further support for the assertion that on- and off-campus developmental writing classes are equally effective, analysis of variance could find no significant differences in grade achievement in freshman composition between those students who transferred from an off-campus developmental writing class to an on-campus freshman composition class and those who transferred from an on-campus developmental writing class to an off-campus freshman composition class. Students who stayed on-campus or off-campus for both classes also received nearly equal grades. Standardization did not alter this insignificance.

Although students who completed an on-campus developmental writing class before transferring to an off-campus freshman composition class persisted at a lower-than-average rate in freshman composition (69.2% versus 80.8%), this difference was rendered insignificant by standardization of grade assignments. Persistence to course completion in freshman composition was not dependent upon location of the previous developmental writing class.

Class size. Class sizes for freshman composition during the period of the study ranged from a low of 2 to a high of 41, with a

mean of 25.9. Sizes of previous developmental writing classes ranged from 2 to 43 students, with a mean of 24.6. Although conventional wisdom would hold that larger class sizes should adversely affect student persistence and achievement, the matter is debatable. In this study, persistence and mean grades in freshman composition both correlated negatively with class size. However, the relationship was weak ($R = -.0102$, $F = 1.88$, significance = .001 for persistence; and $R = -.0102$, $F = 1.88$, significance = $<.0001$ for grades). Moreover, standardization of grade assignments to correct for individual faculty grading patterns rendered these differences insignificant. Apparently, the differences were more teacher-dependent than class-size-dependent.

Although size of the previous developmental writing class did not significantly affect grade achievement of the students in a subsequent freshman composition class (even after standardization), class size did affect persistence in the following class. Surprisingly, however, the relationship was a direct, although not strong, one. That is, students who came from larger developmental writing classes persisted at a greater rate in freshman composition than those who came from smaller developmental classes ($R = .0199$, $F = 2.05$, significance = .0003). This relationship remained significant even after standardization ($R = .0258$, $F = 1.91$, significance = .0012). This finding is consistent with that pointed out by Boylan (1983, p. 2) in his discussion of factors which make a difference in developmental education. The research indicates that

developmental students tend to achieve better in larger classes taught in a benevolently authoritarian manner. An alternate explanation for this finding is that the paraprofessional instructional aides who were hired to help instructors in large, on-campus developmental writing classes positively affected persistence of students in a subsequent developmental writing class. Instructional aides were not provided for the lower-enrollment evening and off-campus classes.

Instructor gender. As mentioned earlier, most of the students in this study took writing classes from male instructors (see Figure 9, page 80, and Figure 11, page 83). No significant differences were detected, however, in the mean persistence and grade achievement of freshman composition students by gender of the instructor. Standardization made these values identical. Furthermore, gender of the developmental writing instructor did not significantly affect persistence and achievement in freshman composition. Moreover, students achieved and persisted equally well for all gender combinations of freshman composition and developmental writing instructors.

However, there were some interesting interactions between teacher and student genders. Although persistence in the freshman composition class was not affected by these interactions, grade achievement was. Male freshman composition students received significantly lower grades from male instructors (2.47) than they did from females (2.52). Female students received slightly higher grades from male teachers (2.79 versus 2.76). The significance and pattern

of these differences were not altered by standardization of grade assignments.

On the other hand, male students who took developmental writing classes from male instructors achieved significantly higher grades (2.52) in a subsequent freshman composition class than did those male students who had a female developmental writing instructor (2.24). Female students did slightly better in freshman composition if they had female teachers (2.70) rather than male teachers (2.67) for developmental writing. Either developmental writing instructors are more effective in teaching students of their same gender, or they are more effective in screening them out, thereby preventing weaker same-gender students from transferring into freshman composition.

Measures of prior ability. The various measures of previous English language ability (high school grade point average, ACT English score, SAT verbal score, Nelson-Denny score, and Stanford Task English and Reading assessment scores) were all significantly correlated with achievement in freshman composition. Of these measures, the strongest predictors of standardized grade achievement in freshman composition were SAT verbal scores ($R = .266$) and high school grade point average ($R = .237$). ACT English scores ($R = .187$), Nelson-Denny scores ($R = .174$), Stanford Task English scores ($R = .187$), and Stanford Task Reading scores ($R = .190$) were slightly weaker predictors.

Of the various measures of previous English language ability, high school grade point average was the only significant predictor of

standardized persistence to course completion in freshman composition. It is, however, a weak predictor of persistence ($R = .0916$).

Units completed. Units completed at Butte College as of Summer of 1983 ranged from a low of 0 to a high of 333, with a mean of 66.8 quarter units. Standardized grade assignments and student persistence in freshman composition are both significantly, but weakly, correlated with units completed ($R = .044$ for grade achievement and $.088$ for persistence). Students who were enrolled in freshman composition classes taught by full-time instructors completed significantly more units at Butte College than those who were in classes taught by part-timers (72.0 versus 54.5). Similarly, students who took a previous developmental writing class from a full-time instructor completed significantly more units than those who took the class from a part-time instructor (91.1 versus 80.7). These findings are not surprising in light of the fact that part-time instructors teach the majority of evening and off-campus classes in which part-time students are more heavily represented.

Variables which affect persistence and achievement. Several factors have been identified as having affected persistence to course completion and grade achievement in freshman composition for the students in this study. The variables which affected persistence were:

1. The part- or full-time status of the student while taking freshman composition and a previous developmental course--part-time students were less likely to persist.

2. The freshman composition instructor--student withdrawal rates varied significantly by individual instructor.
3. The developmental writing instructor--some developmental writing instructors were significantly more effective than others as measured by the persistence of their students in a subsequent freshman composition class.
4. The quarter in which a previous developmental writing class was completed--students who took developmental writing in the Spring quarter showed the lowest persistence in a subsequent freshman composition class.
5. Time delay between courses--students who delayed taking freshman composition after completion of a developmental writing class showed lower persistence than those who didn't delay.
6. Developmental writing class meetings per week--students who took developmental writing classes which met four times per week persisted in a subsequent freshman composition class at a higher rate than those who took classes which met twice or three times per week.
7. Size of the developmental writing class--students who came from higher-enrollment developmental writing classes persisted at a higher rate than those who took a developmental writing class with fewer students.

8. High school grade point average--high school grade point average was a significant, but weak, predictor of persistence in freshman composition.
9. Instructor/instructor status interaction--students who transferred from a part-time developmental writing instructor to a full-time freshman composition instructor persisted to completion in freshman composition at a significantly higher rate (86.6%) than students who transferred from a full-time developmental writing instructor to a part-time freshman composition instructor (72.7%). Students who took both classes from part-timers persisted to completion in freshman composition at a rate of 75.3%, while 80.9% of those who took both classes from full-timers persisted.
10. Freshman composition instructor/student status interaction--part-time freshman composition students showed significantly less persistence if they had a full-time rather than a part-time instructor.
11. Developmental writing instructor/student status interaction--part-time developmental writing students showed slightly less persistence in a subsequent freshman composition course if their developmental writing instructor was full-time rather than part-time.

The variables which affected grade achievement in freshman composition were:

1. Completion of a previous developmental writing class--students who completed a previous developmental writing class received poorer grades in freshman composition than those who did not complete a previous developmental writing class.
2. The part- or full-time status of the student while taking freshman composition--part-time students received lower grades.
3. The freshman composition instructor--student grade achievement varied significantly by individual instructor.
4. Student gender--females received higher grades in freshman composition than did males.
5. The quarter in which the freshman composition class was taken--the best grades (after standardization) were received in the Fall, while the worst grades were received in the Winter.
6. The year in which the freshman composition class was taken--students who took freshman composition in 1981, 1982, or 1983 received better grades than those who took the course in 1979 or 1980.
7. Student/freshman composition instructor gender interaction--male freshman composition students received higher grades from female instructors than they did from

male instructors. Female students received slightly higher grades from male instructors.

8. Student and developmental writing instructor gender interaction--male students who took developmental writing classes from male instructors achieved significantly higher grades in a subsequent freshman composition class than did those male students who had a female developmental writing instructor. Female students did slightly better in freshman composition if they had female rather than male teachers in developmental writing.
9. Measures of previous language ability--of these measures, the strongest predictors of standardized grade achievement were SAT verbal scores and high school grade point average. Nelson-Denny scores, Stanford Task English scores, and Stanford Task Reading scores were slightly weaker predictors.
10. Freshman composition instructor/student status interaction--part-time freshman composition students showed significantly lower grade achievement if they had a full-time rather than a part-time instructor.

Relative importance of control variables. Multiple regression analyses to determine the relative importance of the factors which affect persistence and achievement in freshman composition were difficult because of the large amount of missing data. At most,

students usually had taken only one of the standardized assessment examinations. High school grade point averages were available on only 1626 of the 3497 cases. Only 880 of the students had completed a previous developmental writing class. Regression analysis was then limited due to the potential for listwise deletion of cases due to missing data. Moreover, some of the variables were nominal (e. g., instructor) and, therefore, inappropriate for regression analysis. However, the regression analyses were valuable in rating the relative importance of the control variables.

With standardized grade achievement in freshman composition as the dependent variable and high school grade point average, completion of a prior developmental writing class, part- or full-time status while enrolled in freshman composition, student gender, and the quarter and year the student enrolled in freshman composition as independent variables, student status while enrolled in freshman composition is the variable first entered into a stepwise multiple linear regression equation ($R^2 = .076$, $F = (110)$). The other variables are entered into the equation in the following order: high school grade point average (R^2 change = .039), student gender (R^2 change = .006), the year the student enrolled in freshman composition (R^2 change = .002), completion of a prior developmental writing class (R^2 change = .003), and the quarter the student enrolled in freshman composition (R^2 change = 0). Clearly, student status while taking freshman composition is the strongest of these relatively weak predictors of student grade achievement.

When SAT verbal score is substituted for high school grade point average as a predictor variable in the regression analysis, it is entered first into the equation ($R^2 = .071$, $F = 35.7$). The other variables are entered into the equation in the following order: student status while enrolled in freshman composition (R^2 change = .032), student gender (R^2 change = .011), year of enrollment in freshman composition (R^2 change = .004), and completion of a prior developmental writing class (R^2 change = 0).

When ACT English score is substituted for SAT verbal score as a predictor variable in the regression analysis, the year the student enrolled in freshman composition is entered first into the equation ($R^2 = .062$, $F = 10.5$). The other variables are entered into the equation in the following order: ACT English score (R^2 change = .040), student status while enrolled in freshman composition (R^2 change = .026), completion of a prior developmental writing class (R^2 change = .0234), student gender (R^2 change = .013), and the quarter the student enrolled in freshman composition (R^2 change = .001).

When Nelson-Denny Reading score is substituted for ACT English score as a predictor variable in the regression analysis, it is entered first into the equation ($R^2 = .030$, $F = 5.92$). The other variables are entered into the equation in the following order: student gender (R^2 change = .023), the quarter the student enrolled in freshman composition (R^2 change = .004), the year the student enrolled in freshman composition (R^2 change = .006), completion of a previous

developmental writing class (R^2 change = .002), and status of the student while enrolled in freshman composition (R^2 change = 0).

When the Stanford Task English and Reading scores are substituted for Nelson-Denny Reading score as predictor variables, student status while enrolled in freshman composition is entered first into the equation (R^2 = .059, F = 23.0). The other variables are entered into the equation in the following order: Stanford Task English score (R^2 change = .052), Stanford Task Reading score (R^2 change = .011), student gender (R^2 change = .010), completion of a previous developmental writing class (R^2 change = .004), the year the student was enrolled in the freshman composition class (R^2 change = .003), and the quarter the student was enrolled in the freshman composition class (R^2 change = 0).

With standardized persistence in freshman composition as the dependent variable and part- or full-time status of the student while enrolled in freshman composition, part- or full-time status of the student while enrolled in a prior developmental writing class, the quarter the student completed a prior developmental writing class, the time lapse between completion of developmental writing and enrolling in a subsequent freshman composition class, the meetings per week for the developmental writing class, the size of the developmental writing class, and high school grade point average as independent variables, student status while enrolled in freshman composition is the variable first entered into the equation (R^2 = .088, F = 47.2). The other variables are entered into the equation in the following order: the

time lapse between courses (R^2 change = .012), size of the developmental writing class (R^2 change = .005), high school grade point average (R^2 change = .003), student status while enrolled in developmental writing (R^2 change = .001), and the quarter the student completed a prior developmental writing class (R^2 change = 0). Meetings per week for the developmental writing class did not meet the necessary tolerance level for inclusion into the regression equation. Clearly, the part- or full-time status of the student while enrolled in freshman composition is the strongest of this group of relatively weak predictors of student persistence in a freshman composition class.

Although several variables have been identified in this study as impacting either persistence or grade achievement in freshman composition, none of these variables which could be analyzed using stepwise multiple regression procedures were strong predictors of either of the dependent variables. The highest multiple R^2 achieved in these analyses was .133. The most important predictors of grade achievement in freshman composition appear to be part- or full-time status of the student while enrolled in freshman composition, SAT verbal scores, Nelson-Denny scores, Stanford Task English and Reading scores, and high school grade point average. The most important predictors of persistence to course completion in freshman composition appear to be the part- or full-time status of the student while enrolled in freshman composition and the time lapse between completion of a developmental writing class and enrolling in a subsequent

freshman composition class. Part- or full-time status of the developmental writing instructor, which was later added to these analyses as an independent variable, was neither a strong nor significant predictor of persistence or grade achievement in freshman composition.

Secondary Data File

Description. The secondary data file is comprised of 191 cases of developmental writing classes which enrolled 3955 students from the Fall quarter of 1975 through Summer Session 1983. Schedule, instructor, and grade assignment data were collected, recorded, and analyzed (see Table 4, page 55). The classes were taught by 36 different instructors. No one of them taught more than 13.1% of the classes.

Most (56.5%) of the classes were taught by full-time instructors (see Figure 29, page 136). However, the percentage of developmental writing classes taught by part-time instructors increased significantly over the period of the study, reaching 66.7% by 1981 (see Figure 30, page 137). Nearly 70% of the day classes were taught by full-time instructors, while over 90% of the evening classes were taught by part-timers. All of the off-campus classes were taught by part-time instructors, while 71.5% of the on-campus classes were taught by full-time instructors.

Sixty-six percent of the classes were taught by male instructors (see Figure 31, page 138). Part-time instructors were

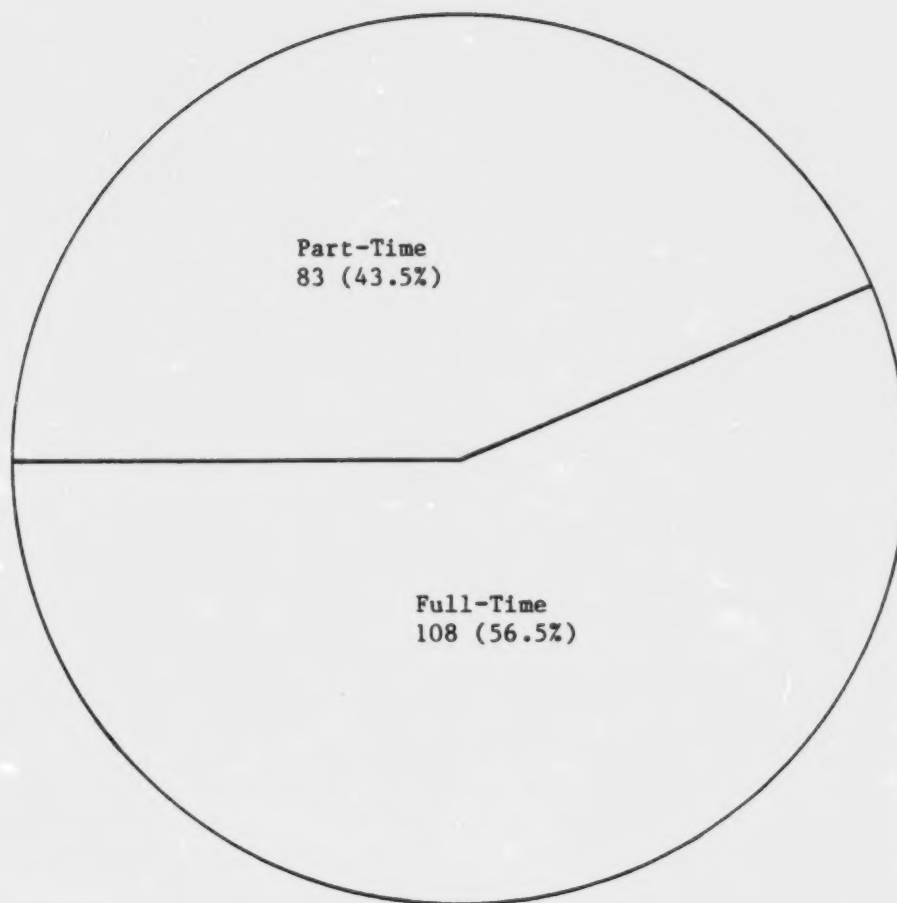


Figure 29. Developmental Writing Classes by Status of Instructor

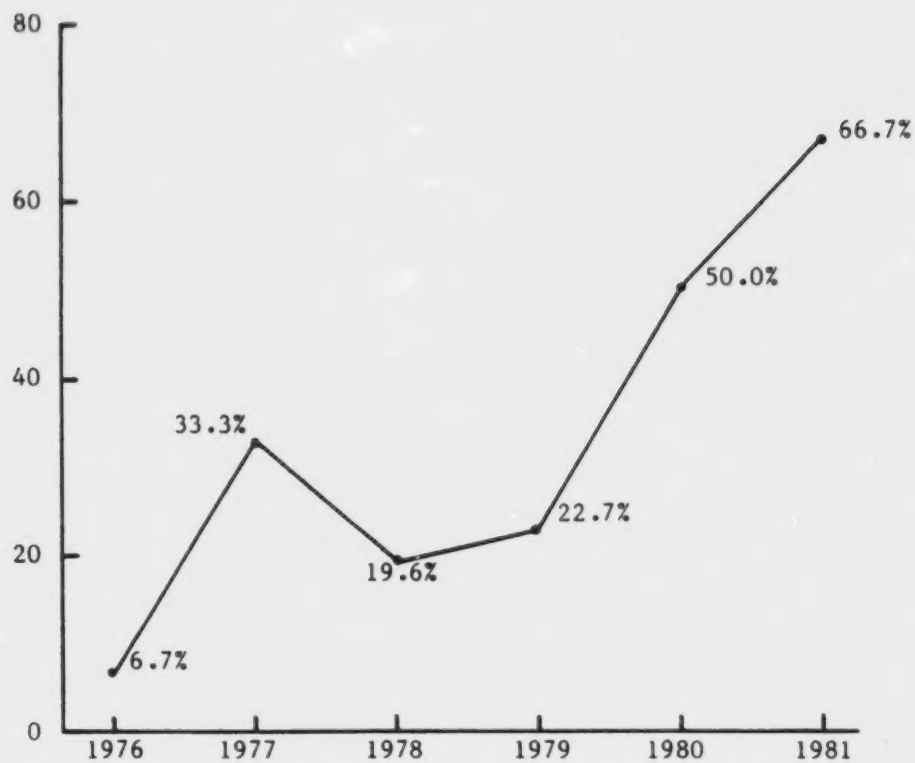


Figure 30. Percent of Developmental Writing Classes Taught by Part-Time Faculty by Year



Figure 31. Developmental Writing Classes by Gender of Instructor

mostly females (61.7%), while full-time instructors were mostly males (86.1%). In fact, 76.9% of the female instructors were part-time, while only 25.0% of the male instructors had part-time status.

Class sizes ranged from a minimum of 1 to a maximum of 43, with an overall mean of 20.7 students. In general, the lower-enrollment classes were taught by part-time instructors (16.2 versus 24.1) and by females (18.9 versus 21.7), who were both more heavily utilized in off-campus and evening classes. Off-campus and evening classes showed lower enrollment than did on-campus and day classes. Mean class size for off-campus classes was 11.2 compared to 23.1 for on-campus classes. Mean class size for evening (after 5:00 PM) classes was 14.6 versus 22.2 for day classes. Class size, however, did not significantly influence the percent of credit, no-credit, withdraw, and incomplete grades.

Grade assignments. Only 59.2% of the 3955 students in this eight-year study successfully completed developmental writing with a credit grade. Withdraw grades were received by 16.8% of the students, incomplete grades by 1.6%, and no-credit grades by 22.5% (see Figure 32, page 140). The percentage of credit grades did not depend significantly upon class meetings per week, quarter the class was offered, class location, or class size.

Male instructors assigned a greater percentage of no-credit grades than did female instructors (25.6% versus 18.3%), while females assigned higher percentages of incomplete (.89% versus .34%) and withdraw grades (20.6% versus 15.0%). However, male and female

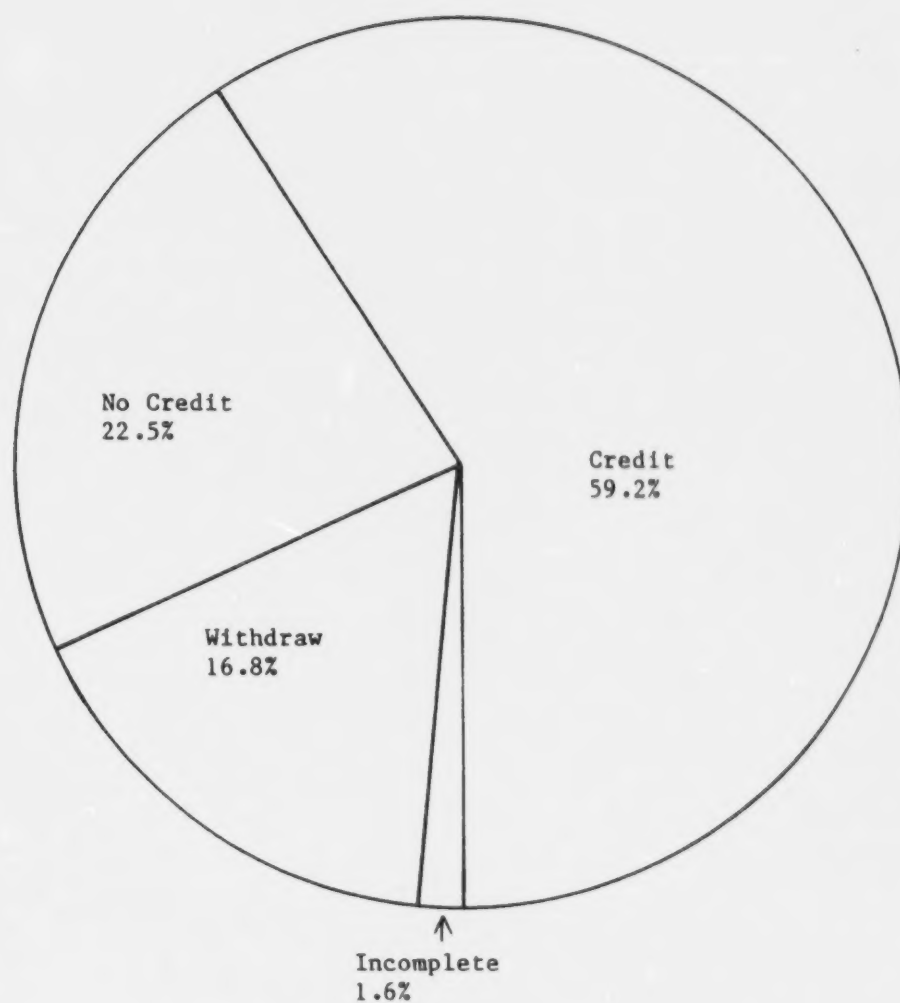


Figure 32. Grade Assignments in Developmental Writing Classes by Percent of All Grades Assigned

teachers gave about the same percentage of credit grades (59.0% versus 61.3%).

Full-time instructors assigned a higher percentage of no-credit grades than did part-timers (26.0% versus 18.3%), while part-time instructors issued a higher percentage of withdraw grades than did their full-time counterparts (20.2% versus 14.5%). However, part-time and full-time teachers assigned about the same percentage of incomplete (.54% versus .52%) and credit (60.9% versus 59.0%) grades.

It is clear, then, that part- and full-time instructors were equally effective in terms of successful completion of their students in developmental writing. While the part-timers assigned more of the less punitive withdraw grades, the full-timers issued more no-credit grades. The percentages of credit grades assigned by full- and part-time instructors were not significantly different. High-risk students were apparently not being systematically screened out by one group of instructors more than the other.

CHAPTER V

Summary, Findings, Discussion, Recommendations

Summary

The purpose of this study was to examine the comparative effectiveness of part- and full-time faculty in terms of the instructional measures of the successful completion of their students and, perhaps more importantly, the persistence to course completion and grade achievement of their students in a subsequent sequential course. The underlying assumption of this research design is that skills and knowledge which are gained in a prerequisite course should be predictive of student success in a subsequent course. If part-timers and full-timers differ significantly in their teaching effectiveness, this difference should be revealed as differences in measures of student persistence and grade achievement in the subsequent course.

The courses chosen for this study were college freshman composition and the prerequisite developmental writing course. This choice was based upon the belief that instructor ability in teaching developmental writing is critical for student success. If a difference in the effectiveness between full- and part-time instructors were to be detected, it was believed that these classes would provide one of the best opportunities. Other reasons for

selecting these classes were the availability of archival data reaching back more than ten years and a fairly good distribution of full- and part-time staffing in the classes during most of that period at the research site.

Butte College, chosen as the research site, is a single-campus, comprehensive, public community college located in the northern Sacramento Valley in California. In all probability, the college is typical of community colleges in its institutional practices with regard to part-time faculty members.

The developmental writing course, ENG 102, Composition Workshop II, is a four-unit course in developmental English which also serves as an Associate Degree graduation requirement. The course was designed to provide for the development of basic composition skills. Freshman composition, ENG 210, Reading and Composition I, is a four-unit course which is accepted by both the University of California and the California State University systems as transferrable for freshman-level composition. Prerequisites are ENG 102 (developmental writing) or an acceptable score on the English placement examination.

It was recognized that many factors affect both student persistence and grade achievement. Even though much of the intervening variance was balanced by the large size of the sample and the longitudinal nature of the study, several of these factors were identified, recorded, and analyzed during the project (see Table 2, page 12). These factors were used as control variables in the analyses. Differences detected in the effectiveness of full- and

variable 1954, 55, 56, 60

part-time instructors were measured against these control variables for relative importance. Interactions between the independent and control variables were measured for significance. Individual student enrollments served as the unit of analysis for the primary data file, while individual courses were the unit of analysis in the secondary data file.

Guiding the design of this study were the following research questions:

1. Do students who were enrolled in developmental writing classes differ from one another in terms of successful completion of that course depending upon whether they took the course from a full-time or part-time instructor?
2. Do students who were enrolled in freshman composition classes differ from one another in terms of achievement and persistence to course completion depending upon whether they took their prerequisite developmental writing course from a full- or part-time instructor?
3. Do students who were enrolled in freshman composition classes taught by full-time instructors differ from one another in terms of achievement and persistence to course completion depending upon whether they took their prerequisite developmental course from a full-time or part-time instructor?
4. Do students who were enrolled in freshman composition classes taught by part-time instructors differ from one

another in terms of achievement and persistence to course completion depending upon whether they took their prerequisite developmental course from a full-time or part-time instructor?

Major Findings

The major findings of these parallel studies to evaluate the relative effectiveness of part- and full-time developmental writing instructors are:

1. Part- and full-time developmental writing instructors were equally effective in terms of the successful completion of their students. Part-time and full-time instructors assigned about the same percentage of credit grades (60.9% versus 59.0%) ($F = .457$, significance = .507).
2. a. Part-time and full-time developmental writing instructors were equally effective in terms of the standardized grade achievement of their students in a subsequent freshman composition class (2.57 versus 2.56) ($F = .061$, significance = .762).
b. Part-time developmental writing instructors were slightly, but not significantly, more effective than their full-time counterparts in terms of standardized persistence of their students in a subsequent freshman composition class (83% versus 80%) ($F = 1.04$, significance = .310).

3. a. Part- and full-time developmental writing instructors were equally effective in terms of the standardized grade achievement of their students in a subsequent freshman composition class taught by a full-time instructor (2.58 versus 2.60) ($F = .020$, significance = .858).
- b. Part-time developmental writing instructors were slightly, but not significantly, more effective than their full-time counterparts in terms of standardized persistence of their students in a subsequent freshman composition class taught by a full-time instructor (86.6% versus 80.9%) ($F = 3.07$, significance = .076).
4. a. Part-time developmental writing instructors were slightly, but not significantly, more effective than their full-time counterparts in terms of the standardized grade achievement of their students in a subsequent freshman composition class taught by a part-time instructor (2.55 versus 2.31) ($F = 3.38$, significance = .065).
- b. Part-time developmental writing instructors were slightly, but not significantly, more effective than their full-time counterparts in terms of standardized persistence of their students in a subsequent freshman composition class taught by a part-time instructor (75.3% versus 72.7%) ($F = .175$, significance = .679).

Major Related Findings

The major related findings of these parallel studies to evaluate the relative effectiveness of part- and full-time developmental writing instructors are:

1. a. Students who were classified as part-time while taking developmental writing classes from part-time instructors had higher, but not significantly higher, standardized persistence rates in a subsequent freshman composition course than did their counterparts who took developmental writing from full-time instructors (79.3% versus 69.6%) ($F = 2.85$, significance = .089).
- b. Students who were classified as part-time while taking developmental writing classes from part-time instructors achieved standardized grades in a subsequent freshman composition course nearly identical to those of their counterparts who took developmental writing from full-time instructors (2.50 versus 2.49) ($F = .001$, significance = .921).
2. a. Students who were classified as full-time while taking developmental writing classes from part-time instructors had slightly, but not significantly, higher standardized persistence rates in a subsequent freshman composition course than did their counterparts who took developmental writing from full-

time instructors (84.1% versus 82.3%) ($F = .342$, significance = .567).

- b. Students who were classified as full-time while taking developmental writing classes from part-time instructors achieved slightly, but not significantly, higher standardized grades in a subsequent freshman composition course than did their counterparts who took developmental writing from full-time instructors (2.61 versus 2.57) ($F = .246$, significance = .626).
- 3. a. Students who were classified as part-time while taking freshman composition classes from part-time instructors had significantly higher standardized persistence rates in that course than did their counterparts who took freshman composition classes from full-time instructors (75.7% versus 61.0%) ($F = 36.7$, significance $< .0001$).
- b. Students who were classified as part-time while taking freshman composition classes from part-time instructors achieved significantly higher standardized grades in that course than did their counterparts who took freshman composition classes from full-time instructors (2.57 versus 2.11) ($F = 39.1$, significance $< .0001$).
- 4. a. Students who were classified as full-time while taking freshman composition classes from part-time and full-

time instructors had nearly equal standardized persistence rates in that course (91.2% versus 92.7%) ($F = .880$, significance = .351).

- b. Students who were classified as full-time while taking freshman composition classes from part-time instructors achieved slightly, but not significantly, lower standardized grades in that course than did their counterparts who took freshman composition classes from full-time instructors (2.73 versus 2.80) ($F = 2.21$, significance = .133).

Discussion

The findings. Over the five- and eight-year periods covered by these parallel studies, utilization of part-time instructors in writing classes has increased substantially (see Figures 13, 14, and 30 on pages 85, 86, and 137). The likely reasons for this increased utilization of part-time instructors in writing classes at Butte College are the increased enrollment in developmental writing classes after instituting the assessment and placement program in 1981 and the fact that the financial uncertainty in California since the passage of Proposition 13 in 1978 has prevented the college from replacing full-time English instructors who left the district.

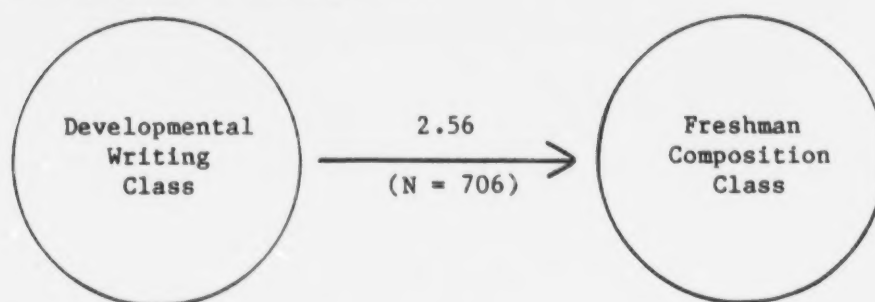
Despite the evidence provided in Chapter II of this dissertation that institutional practices with regard to part-time instructors could, and probably should, be improved, part-timers in

this study were found to be at least as effective as their full-time counterparts.

Not only were part- and full-time developmental writing instructors equally effective in terms of successful completion of their students, but their students also went on to achieve about equal grades in the subsequent freshman composition class (see Figure 33, page 151). In fact, part-time developmental writing instructors were slightly, but not significantly, more effective than their full-time counterparts in terms of persistence of their students in a subsequent freshman composition class (see Figure 34, page 152).

Even more revealing are the findings which indicate that part-time developmental writing instructors may be more effective in preparing students for full-time freshman composition teachers than are full-time developmental writing instructors in preparing students for part-time freshman composition teachers. Students who had a part-time developmental writing instructor and a full-time freshman composition instructor showed standardized grade achievement and persistence rates of 2.58 and 87%. By comparison, students who had a full-time developmental writing instructor and a part-time freshman composition instructor showed standardized grade achievement and persistence rates of 2.31 and 73% (see, Figures 35 and 36, pages 153 and 154). These differences are significant ($F = 3.92$, significance = .046 for grade achievement, and $F = 7.40$, significance = .007 for persistence). This was true despite the fact that part- and full-time developmental writing instructors, on the

- a. Standardized grade achievement in freshman composition after a developmental writing course



- b. Standardized grade achievement in freshman composition by status of previous developmental writing instructor

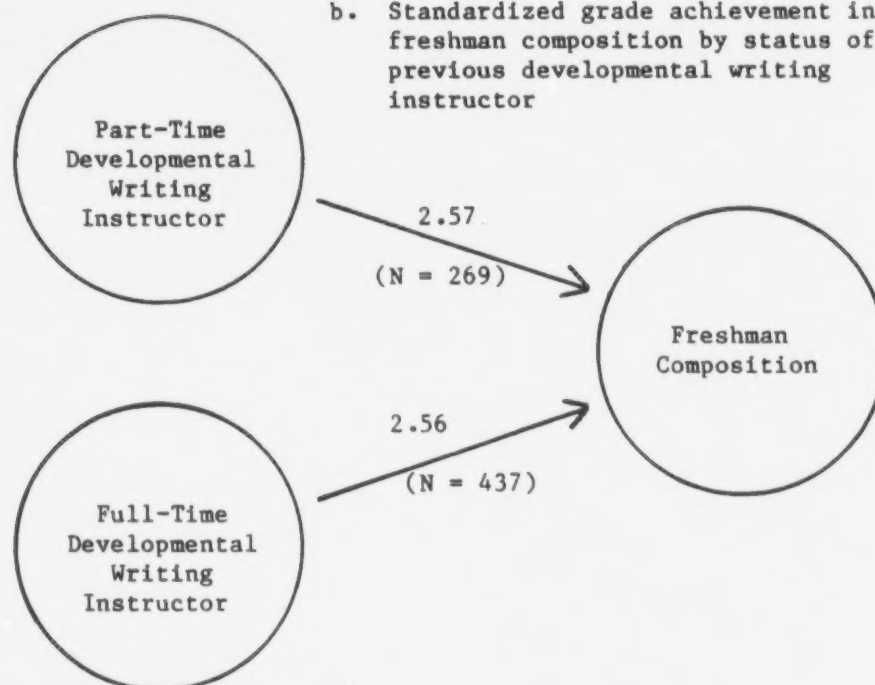
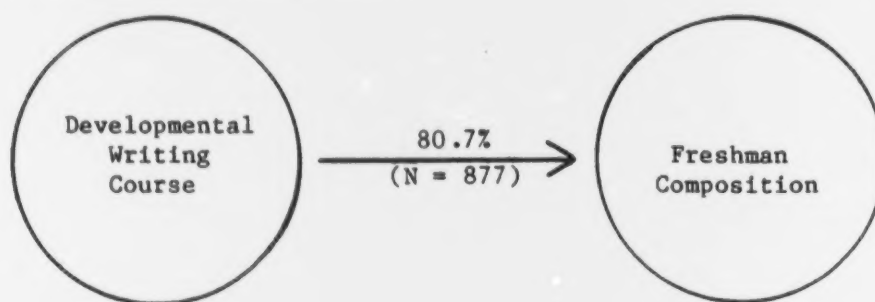


Figure 33

- a. Standardized persistence in freshman composition after a developmental writing course



- b. Standardized persistence in freshman composition by status of previous developmental writing instructor

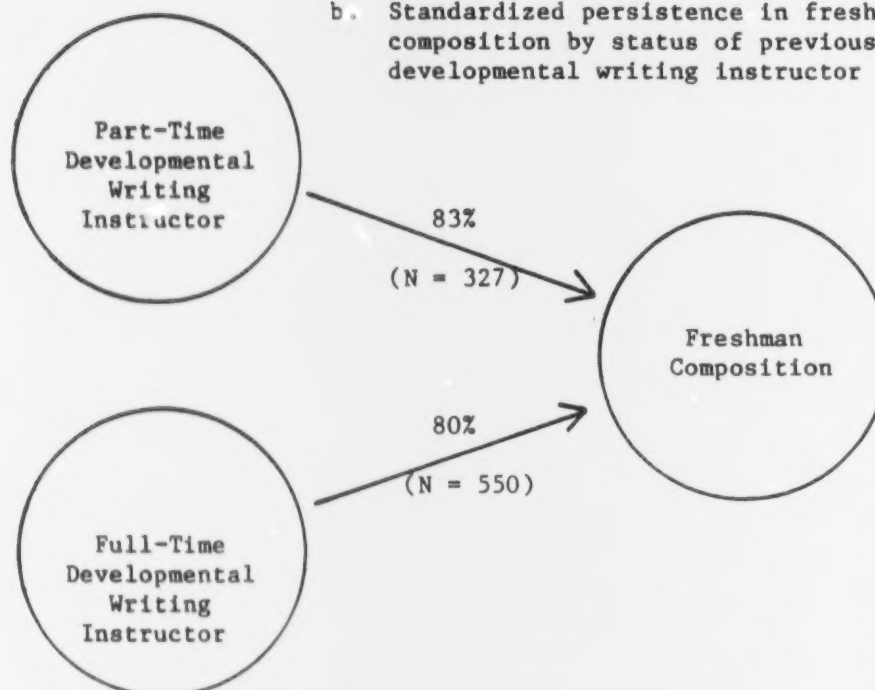


Figure 34

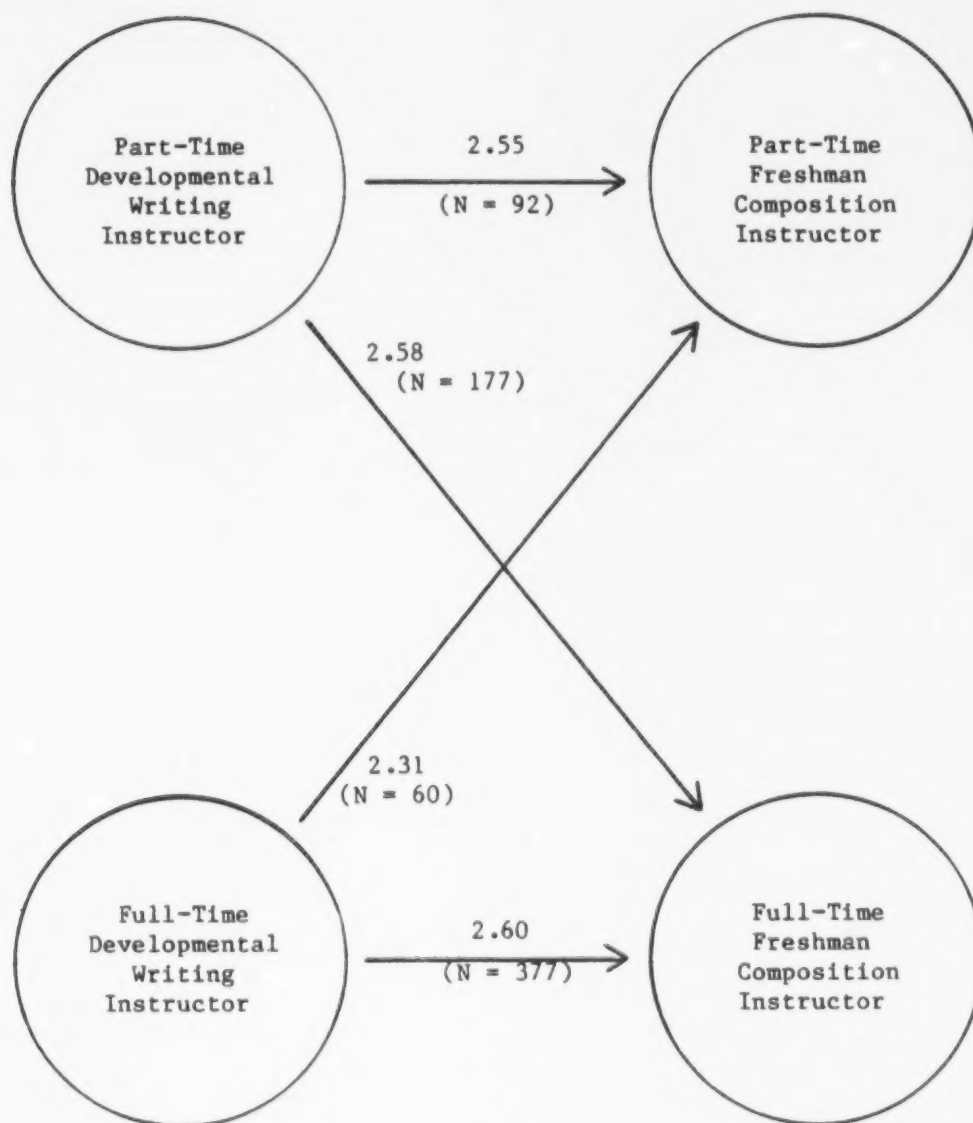


Figure 35. Standardized Grade Achievement in Freshman Composition by Statuses of Developmental Writing and Freshman Composition Instructors

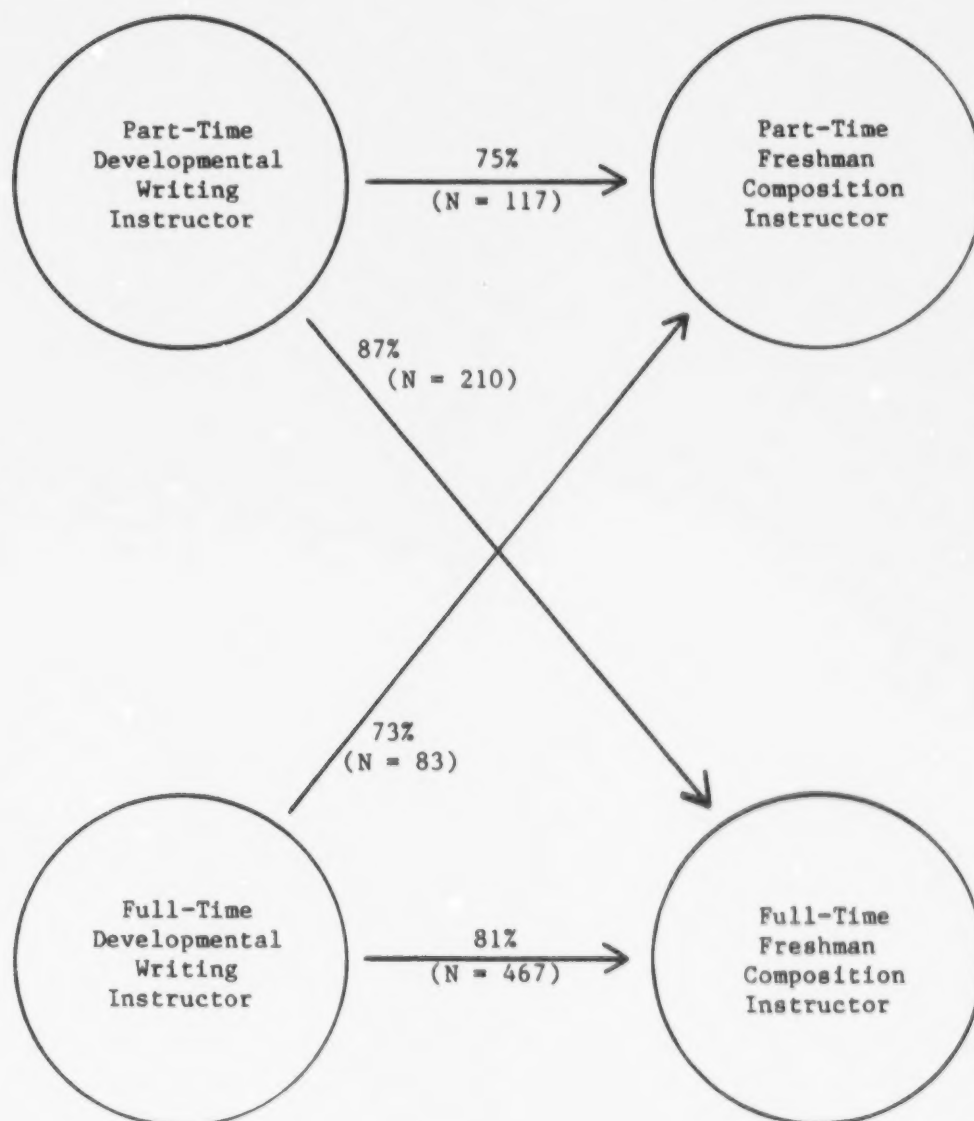


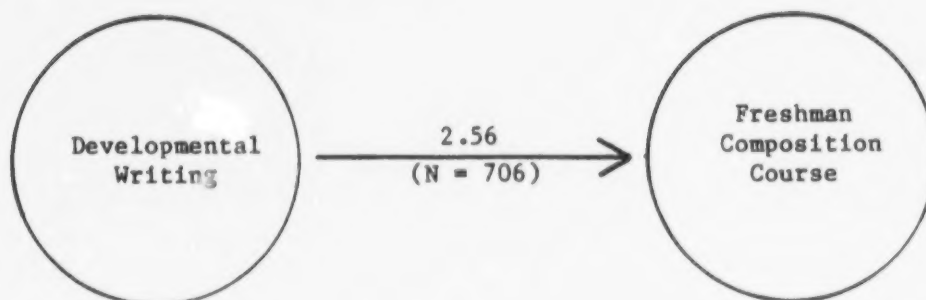
Figure 36. Standardized Persistence Rates in Freshman Composition by Statuses of Developmental Writing and Freshman Composition Instructors

whole, showed nearly equal standardized student grade achievement and persistence rates.

However, another explanation of these results is that part-time freshman composition instructors might have been less effective with students who had taken a developmental writing class than were their full-time counterparts. Although, on the whole, students who take freshman composition from full- and part-time instructors did equally well (standardized grade achievement = 2.636 versus 2.637, standardized persistence rates = 82.2% versus 81.6%), those students who first took developmental writing did not fare equally with full- and part-time freshman composition teachers. Students in this group who took freshman composition from part-time instructors showed standardized grade achievement and persistence rates of 2.46 and 74%, while their colleagues who took freshman composition from full-time instructors showed standardized grade achievement and persistence rates of 2.59 and 83% (see Figures 37 and 38 on pages 156 and 157).

While it may seem contradictory that part-time instructors may be more effective in teaching developmental writing and less effective in teaching freshman composition than their full-time counterparts, it is not inconceivable. The skills and patience required to teach mechanics and form are likely to be different from the skills and abilities required to teach style and critical thinking. These parallel studies would imply that part-timers are more effective in the former environment, while full-timers are more effective in the latter.

- a. Standardized grade achievement in freshman composition after a developmental writing course



- b. Standardized grade achievement in freshman composition of students who had taken developmental writing by status of freshman composition instructor

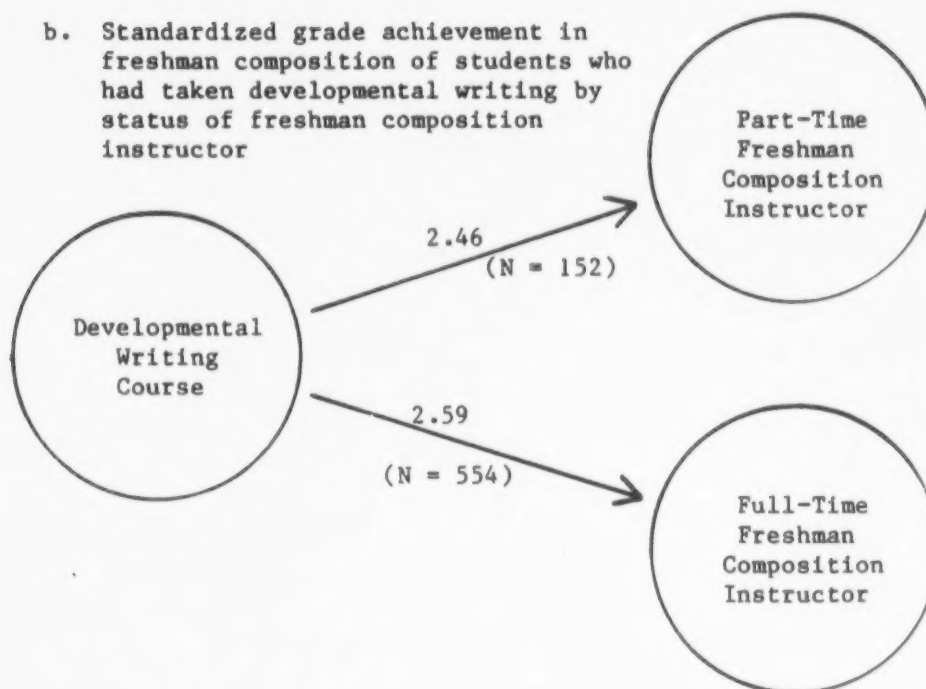
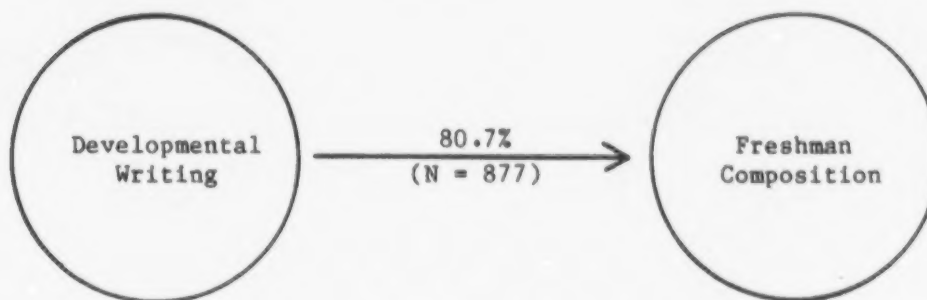


Figure 37

- a. Standardized persistence in freshman composition after a developmental writing course



- b. Standardized persistence in freshman composition of students who had taken developmental writing by status of freshman composition instructor

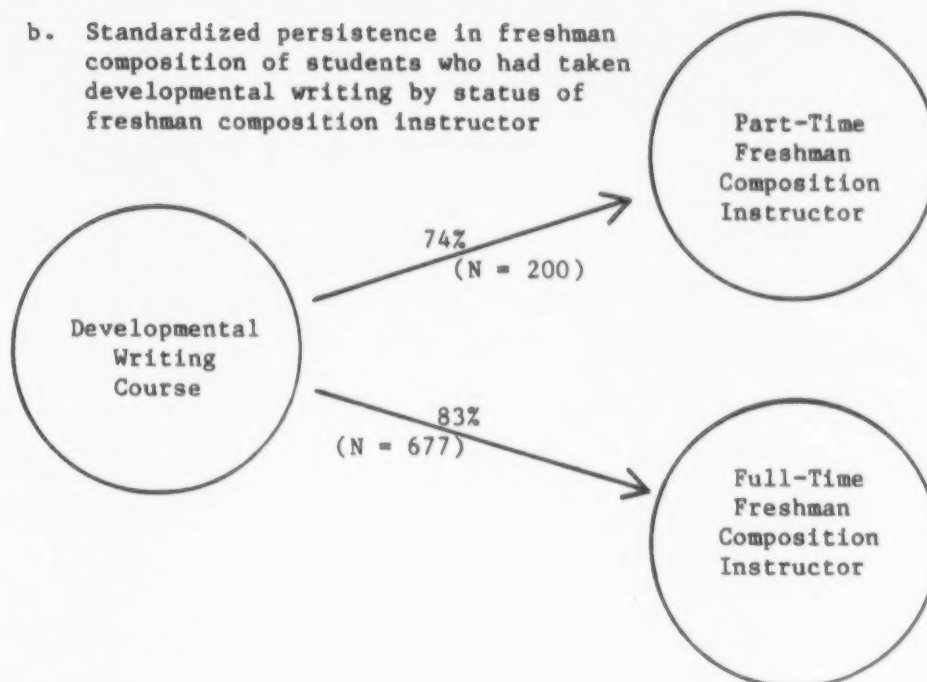


Figure 38

The related findings were, perhaps, the most interesting of the studies. Namely, part-time students appear to be better off taking classes from part-time instructors. Part-time freshman composition students in this study showed significantly higher standardized grade achievement and persistence if they took the course from a part-time instructor. Moreover, students who were part-time while taking developmental writing showed higher, although not significantly higher, standardized persistence rates in a subsequent freshman composition class if they had a part-time developmental writing instructor. Even further evidence for this assertion is provided by the fact that the largest percentage (42.4%) of students who repeated freshman composition were part-time students who took their first class from full-time freshman composition instructors.

This finding is consistent with the speculation expressed by Overall and Cooper (1981, pp. 3-5) that part-time faculty might be more effective in teaching the less-prepared part-time students who are employed during their college careers, while full-time faculty might be more effective teaching more highly prepared full-time students who have no competing obligations. It is likely that full-timers, with less class preparation time (Abel, 1976, p. 14), are less flexible when dealing with part-time students who have unique out-of-class commitments.

Control variables. Since students were not randomly assigned to developmental writing classes taught by full- and part-time instructors, several control variables were collected in an effort to

identify alternate explanations of the findings. In many of these measures, part-time and full-time developmental writing instructors did not differ. Namely, they enrolled students with roughly equivalent measures of previous English language ability; they enrolled students who achieved nearly identical Butte College grade point averages; and they drew from equal populations by gender.

In other measures, however, part-timers differed from their full-time counterparts. Although some of these factors (i. e., instructor gender, class location, and time of day the class started) did not significantly affect standardized grade achievements and persistence rates in freshman composition, several did (i. e., quarter of enrollment, year of enrollment, time lapse between courses, class meetings per week, class size, units completed at Butte College, and full- or part-time student status).

Part-time developmental writing instructors were more heavily utilized in the Spring and Summer terms. Although standardized grade achievement in freshman composition was not significantly affected by the quarter in which a developmental writing class was taken, standardized persistence rates were. Spring quarter, it seems, was the worst time to take developmental writing by this measure, while Summer Session was the best time. Standardized persistence rates were 75% for Spring and 86% for Summer, compared to 80% for Fall and 85% for Winter. The combined standardized persistence rate in freshman composition for students who completed developmental writing in Spring and Summer (when part-time developmental writing instructors were more

heavily represented) was 77%, while the combined rate for Fall and Winter (when full-time developmental writing instructors were more heavily represented) was 82%. Any finding that full-time developmental writing instructors are more effective, then, would be threatened by the alternate explanation that they taught during quarters which positively correlated with student persistence in a subsequent freshman composition class.

Utilization of part-time instructors in developmental writing classes increased significantly during the period of the study, with the greatest increase occurring in 1981. Standardized student grade achievement in freshman composition also increased significantly in this period, with the most dramatic increase occurring in 1981. To the extent that this increase in grades was caused by an intervening variable (e. g., grade inflation or an effective program of basic skills assessment and placement), conclusions about the greater effectiveness of part-time developmental writing faculty are threatened.

Part-time developmental writing instructors appear to be more effective in encouraging their students to enroll sooner in a freshman composition class than are their full-time colleagues. Since this time lapse is significantly and adversely correlated with student persistence in freshman composition, it (rather than more effective teaching) may explain, at least partially, why students who took developmental writing from part-time instructors and freshman composition from full-time instructors persisted to course completion

in freshman composition at a higher rate than did their colleagues who took developmental writing from full-time teachers.

Part-time instructors were more highly represented in developmental writing classes which met twice per week, while full-timers taught more of the developmental writing classes which met four times per week. Since developmental writing classes which met four times per week were more effective in terms of standardized persistence of students in a subsequent freshman composition class, any conclusion that full-time developmental writing instructors are more effective is threatened. Class meetings per week may have been, at least partially, responsible.

Part-time developmental writing instructors taught lower enrollment classes than did their full-time counterparts. Although size of the developmental writing class did not significantly affect standardized grade achievement in a subsequent freshman composition class, it was positively correlated with standardized persistence rates. That is, students who came from larger developmental writing classes persisted at a greater rate in freshman composition than those who came from smaller developmental writing classes. Any finding that full-time developmental writing instructors are more effective, then, would be threatened by the alternate explanation that they taught larger-sized classes.

Students who took a previous developmental writing class from a full-time instructor completed significantly more total units at Butte College than those who took the class from a part-time

instructor. Since standardized grade assignments and student persistence in freshman composition are both significantly, but weakly, correlated with units completed, there is some evidence that full-time and part-time instructors are drawing from non-equivalent populations of students. To the extent that this is true, any finding that full-time instructors are more effective, then, would be threatened by the alternate explanation that their students complete more units.

Full-time students were more heavily represented in developmental writing classes taught by full-time faculty. Because full-time developmental writing students showed a higher, although not significantly higher, standardized persistence in a subsequent freshman composition class, any conclusion that full-time developmental writing faculty are more effective would be threatened by the alternate explanation that they draw more full-time students.

In balancing these control variables, it would seem that the year in which the student took developmental writing and the time lapse between course enrollments would act to threaten any conclusions that part-time developmental writing instructors are more effective. On the other hand, the quarter in which the student took developmental writing, the class meetings per week, the class size, total units completed, and full- or part-time status of the students would threaten any conclusions that full-timers are more effective.

It is important to note, however, that none of these control factors in which part- and full-time developmental writing faculty

differ are strongly correlated to standardized persistence nor grade achievement in a subsequent freshman composition class. Stepwise multiple linear regressions indicate that the strongest predictors of student success in freshman composition are the full- or part-time status of the student while enrolled in freshman composition, SAT verbal scores, Nelson-Denny scores, and Stanford Task English and Reading scores. Of the variables which differ by instructor status, only time lapse between completion of a developmental writing class and enrolling in a subsequent freshman composition class was somewhat important in predicting standardized persistence in freshman composition. It was, however, a weak predictor.

Recommendations for Further Study

It is not unusual in studies of this nature to uncover relationships which lead to further questions or suggestions for further research. In this study, for example, there was evidence presented that instituting a basic skills assessment and placement program was beneficial. Student grade achievement in both developmental writing and freshman composition have improved since the program began. Furthermore, the assessment and placement program appears to be effective in increasing student achievement throughout the curriculum at Butte College. While basic skills abilities of entering students, as measured by high school grade point averages, have not changed significantly since the program began, Butte College grade point average has increased significantly. Moreover, the

percentage of students who repeated freshman composition has declined since the basic skills assessment and placement program was instituted. Certainly, a study focusing upon the effectiveness of a program of basic skills assessment and placement would be beneficial to those of us involved in higher education.

This study also provided evidence that completion of developmental writing prior to enrolling in freshman composition has a substantial and significant impact upon student achievement and persistence at Butte College. While the students who enrolled in developmental writing scored significantly lower in every measure of prior English language ability, they were able to persist to course completion in freshman composition at a rate that was not significantly different from those students who did not complete developmental writing but came to Butte College with higher measures of ability. Furthermore, lower measures of previous English language ability were required to persist to completion in freshman composition if the student had completed a previous developmental writing course. Similarly, lower measures of previous English language ability were required to earn grades of A, B, and C in freshman composition if a student had completed a previous developmental writing course. With the questions now being raised about effectiveness of developmental programs and courses in institutions of higher education, it is clear that further research is needed.

In this study, several factors were identified as affecting student persistence and achievement in freshman composition (see pages

125-129). While some of these are easily understandable, others could be studied further. The student/instructor gender interactions are a case in point. Why is it that male instructors give better grades to female students and vice versa? Are developmental writing teachers more effective in teaching students of their same gender, or do they screen out the weaker students of their same gender while passing weaker, opposite-gender students?

Perhaps the most interesting research question raised by the study arose from the major related finding that part-time students are better off taking classes from part-time instructors. While some speculations were offered for this finding, further study is indeed indicated. Perhaps a more qualitative research design would uncover some of the reasons for this bias, if, indeed, it exists beyond the confines of the present study.

BIBLIOGRAPHY

- Abel, E. K. Invisible and Indispensible: Part-Time Teachers in California Community Colleges. Santa Monica: Santa Monica College, 1976. (ERIC Document Reproduction Service No. ED 132 984)
- Albert, L. S., & Watson, R. J. "Mainstreaming Part-Time Faculty: Issue or Imperative?" New Directions for Community Colleges: Using Part-Time Faculty Effectively, 1980, 8(2), 73-80.
- American Association of Community and Junior Colleges. 1982 Community, Junior, and Technical College Directory. Washington, D. C., 1982.
- Andes, J. "The Legal Position of Part-Time Faculty." Current Issues in Higher Education, 1981, 4, 11-15.
- Bagwell, R., & Elloff, I. "Faculty Development for Part-Timers." Current Issues in Higher Education, 1981, 4, 16-20.
- Barnard, C. The Functions of the Executive. Cambridge, Mass.: Harvard University Press, 1938.
- Beman, R. R. "Observations of an Adjunct Faculty Member." New Directions for Community Colleges: Using Part-Time Faculty Effectively, 1980, 8(2), 81-84.
- Bender, L. W., & Breuder, R. "Part-Time Teachers--'Step-Children' of the Community College." Community College Review, April 1973, 1(1), 29-37.
- Bender, L. W., & Hammons, J. O. "Adjunct Faculty: Forgotten and Neglected." Community and Junior College Journal, October 1972, 43(2), 20-22.
- Blackburn, R. T. "Part-Time Faculty and the Production of Knowledge." New Directions for Institutional Research: Employing Part-Time Faculty, Summer 1978, 2, 99-111.
- Blank, S., & Greenberg, B. "Living at the Bottom." WPA Writing Program Administration, Fall 1981, 5(1), 9-12.
- Bonham, G. "Part-Time Faculty: A Mixed Blessing." Change--The Magazine of Higher Learning, April 1982, 14(3), 10-11.

- Booth, W. C. "A Cheap, Efficient, Challenging, Sure-Fire and Obvious Device for Combating the Major Scandal in Higher Education Today." WPA Writing Program Administration, Fall 1981, 5(1), 35-39.
- Boylan, H.R. "Developmental Instruction: What Really Makes a Difference?" Research in Developmental Education, 1983, 1(3).
- Bramlett, P., & Rodriguez, R. C. "Part-Time Faculty." Community and Junior College Journal, December/January 1982-83, pp. 40-41.
- California Teachers Association v. Santa Monica Community College District, California Court of Appeal, Second District, Division 2, 144 Cal. Rptr. 620, 1978.
- Castetter, W. B., & Heisler, R. S. Developing and Defending a Dissertation Proposal. Philadelphia: Center for Field Studies, Graduate School of Education, University of Pennsylvania, 1980.
- Cohen, A. M., & Brawer, F. B. The American Community College. San Francisco: Jossey-Bass, 1982.
- Cohen, A. M., & Hill, A. Instructional Practices in the Sciences, Spring 1978. Los Angeles: Center for the Study of Community Colleges, 1978. ERIC Document Reproduction Service No. ED 160 144)
- Cooke, H. L., & Hurlburt, A. S. "Part-Time Faculty Needs Full-Time Support." Community College Review, June 1976, 4(1), 15-18.
- Cottingham, W. T., Newman, M. F., & Sims, D. M. "Is There Practical Help for the Part-Time Faculty--Our New and Neglected Majority?" Community College Review, Summer 1981, 9(1), 12-17.
- Cruise, R. J., Furst, L. G., & Klimes, R. E. "A Comparison of Full-Time and Part-Time Instructors at Midwestern Community College." Community College Review, Summer 1980, 8(1), 52-55.
- Decker, E. H. "Utilizing Part-Time Faculty for Community Based Education." New Directions for Community Colleges: Using Part-Time Faculty Effectively, 1980, 8(2), 61-65.
- DeSantis, J. P. "Support for Training Vocational-Technical Adjunct Faculty." New Directions for Community Colleges: Using Part-Time Faculty Effectively, 1980, 8(2), 67-71.
- Diederich, P. B. Measuring Growth in English. Urbana, Ill.: National Council of Teachers of English, 1974.

- Dilworth, C. B., Jr. Predilection in the Assessment of Writing. Remarks prepared for delivery at the Annual Meeting of the Conference on College Composition and Communication, March 26-28, 1981. Dallas. (ERIC Document Reproduction Service No. ED 200 987)
- Eliason, N. C. "Part-Time Faculty: A National Perspective." New Directions for Community Colleges: Using Part-Time Faculty Effectively, 1980, 8(2), 1-12.
- Ernst, R. J., & McFarlane, L. A. "Are We Shortchanging Our Students by Using Part-Time Faculty?" New Directions for Institutional Research: Employing Part-Time Faculty, Summer 1978, 2, 89-97.
- Ferner v. Harris, California Court of Appeal, Second District, Division 2, 144 Cal. Rptr. 620, 1978.
- Ferris, P. The Part-Time Instructor in the Los Rios District: An Analysis. Sacramento, Calif.: Los Rios Community College District, 1976. (ERIC Document Reproduction Service No. ED 121 364)
- Forrest, A. Increasing Student Competence & Persistence: The Best Case for General Education. ACT National Center for the Advancement of Educational Practices, 1982.
- Friedlander, J. "Instructional Practices of Part-Time and Full-Time Faculty." Community College Review, Winter 1979, 6(3), 65-73.
- Friedlander, J. "Instructional Practices of Part-Time Faculty." New Directions for Community Colleges: Using Part-Time Faculty Effectively, 1980, 8(2), 27-36.
- Greenwood, R. "Making 'What's-His-Face' Feel at Home: Integrating Part-Time Faculty." New Directions for Community Colleges: Using Part-Time Faculty Effectively, 1980, 8(2), 55-60.
- Grymes, R. J. A Survey and Analysis of Part-Time Instructors at J. Sargeant Reynolds Community College [Virginia]. Richmond, May 1976. (ERIC Document Reproduction Service No. ED 125 687)
- Guichard, G., Mangham, C., & Gallery, G. M. Part-Time Employment. Sacramento, Calif.: Office of the Chancellor, California Community Colleges, 1975. (ERIC Document Reproduction Service No. ED 111 464)
- Guthrie-Morse, B. "The Utilization of Part-Time Faculty in Community Colleges." Community College Frontiers, Spring 1977, 7(3), 8-17.

- Haddad, M., & Dickens, M. E. "Competencies for Part-Time Faculty: The First Step." Community and Junior College Journal, November 1978, 49(3), 22-24.
- Hammons, J. "Adjunct Faculty: Another Look." Community College Frontiers, 1981, 9(2), 46-53.
- Hammons, J., & Watts, G. "Evaluating Part-Time Faculty Performance." The Journal of Staff, Program, and Organizational Development, Spring 1983, 1(1), 18-22.
- Hampton, D. R., Summer, C. E., & Webber, R. A. Organizational Behavior and the Practice of Management (4th ed.). Glenview, Ill.: Scott, Foresman and Company, 1982.
- Harris, D. A. "From the President's Perspective: Part-Time Faculty in the 1980's." New Directions for Community Colleges: Using Part-Time Faculty Effectively, 1980, 8(2), 13-16.
- Head, R. B., & Kelley, E. P., Jr. "Part-Time Faculty and the Law." New Directions for Institutional Research: Employing Part-Time Faculty, Summer 1978, 2, 41-58.
- Hirsch, E. D., Jr. "Research in Writing: The Issues." In L. N. Kasden & D. R. Hoebler (Eds.), Basic Writing: Essays for Teachers, Researchers, Administrators. Urbana, Ill.: National Council of Teachers of English, 1980.
- Hoenninger, R., & Black, R. "Neglect of a Species." Community and Junior College Journal, November 1978, 49(3), pp. 25-27.
- Hoy, W., & Miskel, C. Educational Administration--Theory, Research, and Practice. New York: Random House, 1982.
- Kellams, S. E., & Kyre, K. K. "Part-Time Faculty in Four-Year Colleges and Universities." New Directions for Institutional Research: Employing Part-Time Faculty, Summer 1978, 2, 17-40.
- Kennedy, G. "Preparation, Orientation, Utilization, and Acceptance of Part-Time Instructors." Junior College Journal, April 1967, 37(7), 14-15.
- Kidder, L. H. Research Methods in Social Relations. New York: Holt, Rinehart and Winston, 1981.
- Koltai, L. "King Solomon and the Bowl of Spaghetti." Community and Junior College Journal, September 1977, 48(1), 18-20.
- Kuhns, E. P. "Part-Time Faculty." Junior College Journal, January 1963, 33(5), 8-12.

- Lawless, D. J. Organizational Behavior: The Psychology of Effective Management (2nd ed.). Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1979.
- Leslie, D. W. "The Part-Time Faculty Labor Force." New Directions for Institutional Research: Employing Part-Time Faculty, Summer 1978, 2, 1-16.
- Leslie, D. W., Kellams, S. E., & Gunne, G. M. Part-Time Faculty in American Higher Education. New York: Praeger, 1982.
- Lolley, J. L. "A Comparison of the Use of Instructional Resources by Full- and Part-Time Teachers." Community/Junior College Research Quarterly, 1980, 5(1), 47-51.
- Lombardi, J. "Salaries for Part-Time Faculty: New Trends." Community College Review, Autumn 1976, 3(3), 77-88.
- Magarrell, J. "Part-Time Professors on the Increase." The Chronicle of Higher Education, 1978, 15(18), 1-6.
- Maher, T. H., & Ebben, J. "The Margin of Quality: Selection and Evaluation of Part-Time Faculty." New Directions for Institutional Research: Employing Part-Time Faculty, Summer 1978, 2, 73-88.
- March, J., & Simon, H. Organizations. New York: John Wiley & Sons, Inc., 1958.
- Marsh, J. P., & Lamb, T. An Introduction to the Part-Time Teaching Situation with Particular Emphasis on Its Impact at Napa Community College. Napa County, Calif.: Napa College Part-Time Teachers Association, 1975. (ERIC Document Reproduction Service No. ED 125 683)
- McCabe, R. H., & Brezner, J. L. "Part-Time Faculty in Institutional Economics." New Directions for Institutional Research: Employing Part-Time Faculty, Summer 1978, 2, 59-72.
- McClelland, B. "Part-Time Faculty in English Composition." WPA Writing Program Administration, Fall 1981, 5(1), 13-18.
- McDugle, L. G. "Orientation Programs for Part-Time Faculty Members." Community College Review, Summer 1980, 8(1), 20-23.
- McFarland, J. "Discount Teaching and Discount Professionalism: The Costs of Flexibility." FACCC Bulletin, September 1982, pp. 2-3; 7-8.

- McIntyre, C., et al. Report on Faculty Employment in the California Community Colleges. Sacramento, Calif.: Chancellor's Office Analytical Studies Unit, January 1982.
- McQuade, D. "The Case of the Migrant Workers." WPA Writing Program Administration, Fall 1981, 5(1), 29-34.
- Mintzberg, H. The Structuring of Organizations. Englewood Cliffs, N. J.: Prentice-Hall, 1979.
- Moe, J. "A Staff Development Model for Part-Time Instructors." New Directions for Community Colleges: Developing Staff Potential, Autumn 1977, 19, 35-46.
- National Center for Educational Statistics. Digest of Educational Statistics. Washington, D. C., 1981.
- Noel, L. "Editor's Notes." New Directions for Student Services: Reducing the Dropout Rate, 1978, 3, vii-ix.
- Overall, J. U., & Cooper, T. L. The Growth of Part-Time Faculty: Economic and Quality Considerations. Remarks prepared for delivery at the Annual Meeting of the Association for Institutional Research, May 1981. Minneapolis. (ERIC Document Reproduction Service No. ED 213 349)
- Parsons, M. H. "Future Directions: Eight Steps to Parity for Part-Time Faculty." New Directions for Community Colleges: Using Part-Time Faculty Effectively, 1980, 8(2), 85-88.
- Parsons, M. H. "Realizing Part-Time Faculty Potential." New Directions for Community Colleges: Using Part-Time Faculty Effectively, 1980, 8(2), 47-53.
- Peralta Federation of Teachers, Local 1603, American Federation of Teachers, AFL-CIO v. Peralta Community College, California Supreme Court, 155 Cal. Rptr. 679, 1979.
- Pierce, H. B., & Miller, R. T. "Burlington County College: Developmental Program for Adjunct Faculty." New Directions for Community Colleges: Using Part-Time Faculty Effectively, 1980, 8(2), 37-45.
- Pollock, A., & Breuder, R. L. "The Eighties and Part-Time Faculty." Community College Review, Spring 1983, 9(4), 58-62.
- Price, F. H., & Lane, W. H. An Analysis of Community and Junior College Use of Part-Time Faculty. Manhattan, Kansas: Kansas State University, 1976. (ERIC Document Reproduction Service No. ED 121 362)

- Riphey, D. "What Is Student Development?" Horizons Issue Monograph Series, 1981.
- Roueche, J. E. "Wanted: Teaching Excellence in the Community College." Community College Review, Spring 1983, 10(4), 52-57.
- Roueche, J. E., & Mink, O. G. "Overcoming Learned Helplessness in Community College Students." Journal of Developmental and Remedial Education, Spring 1982, 5(3), 2-5; 20.
- Roueche, S. D., & Comstock, V. N. A Report on Theory and Method for the Study of Literacy Development in Community Colleges (NIE-400-78-0600). Washington, D. C.: The National Institute of Education, 1981.
- Scheibmeir, A. J. An Investigation of Part-Time Faculty Staff Development in Public Community Junior Colleges in the United States. Unpublished doctoral dissertation, The University of Texas at Austin, May 1980.
- Scully, M. G. "Part-Time Teachers: Many Are Angry." Chronicle of Higher Education, January 20, 1975, 9, 1; 4.
- Sewell, D. H., Brydon, C. W., & Plosser, W. D. Report on a Statewide Survey about Part-Time Faculty in California Community Colleges. Sacramento, Calif.: California Community and Junior College Association, 1976. (ERIC Document Reproduction Service No. ED 118 195)
- Smith, R. R. "Can Participatory Programs Realize Part-Time Faculty Potential?" New Directions for Community Colleges: Using Part-Time Faculty Effectively, 1980, 8(2), 17-26.
- Thompson, J. Organization in Action. New York: McGraw-Hill Book Company, 1967.
- Tuckman, H. P. "Part-Time Faculty: Some Suggestions of Policy." Change--The Magazine of Higher Learning, January-February 1981, 13(1), 8-10.
- Tuckman, H. P., & Tuckman, B. H. "Who Are the Part-Timers and What Are Colleges Doing for Them?" Current Issues in Higher Education, 1981, 4, 7-10.
- Watkins, K. "On Being Part-Time." Innovation Abstracts, February 12, 1982, 4(4).

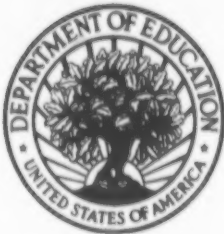
- Weinman, G. "A Part-Time Freshman Writing Staff: Problems and Solutions." WPA Writing Program Administration, Fall 1981, 5(1), 21-28.
- Willett, L. H. "Comparison of Instructional Effectiveness of Full- and Part-Time Faculty." Community/Junior College Research Quarterly, 1980, 5, 23-30.
- Wilson, R. C., Gaff, J. G., Dienst, E. R., Wood, L., & Bavry, J. L. College Professors and Their Impact on Students. New York: John Wiley & Sons, 1975.

VITA

George Robert Boggs was born in Conneaut, Ohio, on September 4, 1944, the son of Mary Ellen Boggs and George Robert Boggs, Sr. After graduation in 1962 from Rowe High School in Conneaut, he entered The Ohio State University, earning the degree of Bachelor of Science with a major in chemistry in August, 1966. Upon leaving Ohio in September of 1966, he entered the Graduate School of The University of California at Santa Barbara, where he received the Master of Arts degree in chemistry in August, 1968. Mr. Boggs was then employed, in September of 1968, as one of the founding faculty members at Butte College in Oroville, California, where he taught lower division classes in natural sciences. In 1972, he was appointed Chairman of the Division of Natural Science and Allied Health at Butte College, a position which he held until 1981, when he was appointed to his present position as Associate Dean of Instruction at that institution. Mr. Boggs has continued his education at California State University at Chico and, in the Summer of 1982, entered the Graduate School of The University of Texas at Austin as a student in the Community College Leadership Program. In 1969, he married Ann Holladay of Burlington, North Carolina. They have three sons: Kevin Dale, born in 1973; Ian Asher, born in 1977; and Micah Benjamin, born in 1979.

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